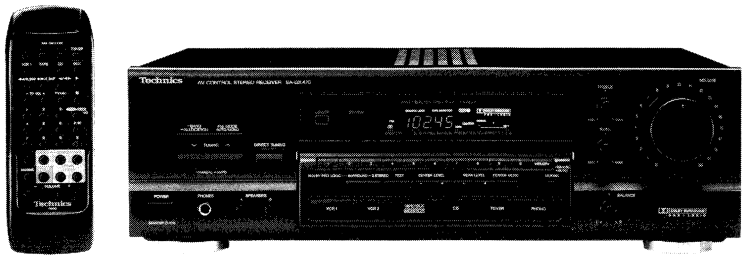
ORDER NO. AD9406151C8

Service Manual

AV Control Stereo Receiver

Receiver

SA-GX470



Colour

(K) ... Black Type

Areas

Suffix for Model No.	Area	Colour
(E)	Europe.	(K)
(EB)	Great Britain.	
(EG)	Germany and Italy.	
(G)	Asia, Latin America, Middle Near East and Africa.	
(GN)	Oceania.	

SPECIFICATIONS (DIN 45 500)

■ AMPLIFIER SECTION

Power output (at 240 V)	
DIN 1 kHz (T.H.D. 1%)	
[For (E, EB, EG) areas.]	2×80 W (4 Ω)
[For (G, GN) areas.]	2×100 W (8 Ω)
20 Hz–20 kHz continuous power output both channels driven	
[For (E, EB, EG) areas.]	2×50 W (8 Ω)
[For (G, GN) areas.]	2×80 W (8 Ω)
Total harmonic distortion	
rated power at 20 Hz–20 kHz	0.05% (8 Ω)
half power at 1 kHz	0.03% (8 Ω)
Power output at the Dolby Pro Logic operation	
DIN 1 kHz (T.H.D. 1%)	
Front [For (E, EB, EG) areas.]	2×50 W (4 Ω)
[For (G, GN) areas.]	2×40 W (8 Ω)
Center [For (E, EB, EG) areas.]	50 W (4 Ω)
[For (G, GN) areas.]	40 W (8 Ω)
Rear [For (E, EB, EG) areas.]	25 W (4 Ω)
[For (G, GN) areas.]	20 W (8 Ω)
Intermodulation distortion	
rated power at 60 Hz: 7 kHz=4:1, SMPTE	0.5% (8 Ω)
Power bandwidth	
both channels driven, −3 dB	10 Hz–40 kHz (8 Ω)
Damping factor	40 (8 Ω)
Input sensitivity and impedance	
PHONO	3 mV/47 kΩ
CD, VCR 1, VCR 2, TAPE/DCC	200 mV/22 kΩ
S/N at rated power (8 Ω)	
PHONO	70 dB (IHF, A: 80 dB)
CD, VCR 1, VCR 2, TAPE/DCC	75 dB (IHF, A: 88 dB)
Frequency response	
PHONO	RIAA standard curve (30 Hz–15 kHz)±0.8 dB
CD, VCR 1, VCR 2, TAPE/DCC	10 Hz–40 kHz, ±3 dB
Tone controls	
BASS	50 Hz, +10 to −10 dB
TREBLE	20 kHz, +10 to −10 dB
Output voltage	
VCR 1 OUT, TAPE/DCC REC (OUT)	200 mV
Channel balance (250 Hz–6.3 kHz)	±1 dB
Channel separation	55 dB
Headphones output level and impedance	430 mV/330 Ω
Load impedance	
A or B [For (E, EB, EG) areas.]	4–16 Ω
[For (G, GN) areas.]	8–16 Ω
A and B	8–16 Ω

■ FM TUNER SECTION

Frequency range	87.50–108.00 MHz
Sensitivity	
S/N 30 dB	1.5 μV/75 Ω
S/N 26 dB	1.3 μV/75 Ω
S/N 20 dB	1.2 μV/75 Ω
IHF usable sensitivity	(IHF '58) 1.5 μV/75 Ω
IHF 46 dB stereo quieting sensitivity	22 μV/75 Ω
Total harmonic distortion	
MONO	0.2%
STEREO	0.3%
S/N	
MONO	60 dB (75 dB, IHF)
STEREO	58 dB (71 dB, IHF)
Frequency response	20 Hz–15 kHz, +1 dB, −2 dB
Alternate channel selectivity	
±400 kHz	65 dB
Capture ratio	1 dB
Image rejection at 98 MHz	40 dB
IF rejection at 98 MHz	70 dB
Spurious response rejection at 98 MHz	70 dB
AM suppression	50 dB
Stereo separation	
1 kHz	40 dB
Carrier leak	
19 kHz	−30 dB (−35 dB, IHF)
38 kHz	−50 dB (−55 dB, IHF)
Channel balance (250 Hz–6.3 kHz)	±1.5 dB
Limiting point	1.2 μV

Technics®

Bandwidth	
IF amplifier	180 kHz
FM demodulator	1000 kHz
Antenna terminal(s)	75 Ω (unbalanced)

■ AM TUNER SECTION

• For (E, EB, G, GN) areas.	
Frequency range	
MW	522 – 1611 kHz (9 kHz steps) 530 – 1620 kHz (10 kHz steps)
LW	144 – 288 kHz
Sensitivity	
MW	20 μV, 330 μV/m
LW	45 μV
Selectivity	
MW (at 999 kHz)	55 dB
LW (at 252 kHz)	55 dB
Image rejection	
MW (at 999 kHz)	40 dB
LW (at 252 kHz)	40 dB
IF rejection	
MW (at 999 kHz)	55 dB
LW (at 252 kHz)	55 dB
• For (EG) area.	
Frequency range	522 – 1611 kHz (9 kHz steps) 530 – 1620 kHz (10 kHz steps)
Selectivity (S/N 20 dB)	20 μV, 330 μV/m
Selectivity at 999 kHz	55 dB
Image rejection at 999 kHz	40 dB
IF rejection at 999 kHz	55 dB

■ VIDEO SECTION

Output voltage at 1 V input (unbalanced)	1 ± 0.1 Vp-p
Maximum input voltage	1.5 Vp-p
Input/output impedance	75 Ω (unbalanced)

■ GENERAL

Power consumption	
[For (E, EB, GN) areas.]	220 W
[For (EG) area.]	170 W
[For (G) area.]	210 W
Power supply	
[For (E, EB, EG, GN) areas.]	AC 50/60 Hz, 230 – 240 V
[For (G) area.]	AC 50/60 Hz, 110 – 127 V/220 – 240 V
Dimensions (W × H × D)	430 × 136 × 352 mm
Weight	8.6 kg

■ REMOTE CONTROL TRANSMITTER

Control keys	38 keys
Dimensions (W × H × D)	62 × 27 × 175 mm
Weight (including batteris)	106 g (3.2 oz)
Power source	Two UM-4/AAA (Panasonic R03/LR03 or equivalent)

Notes:

1. Design and specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortions is measured by the digital spectrum analyzer.

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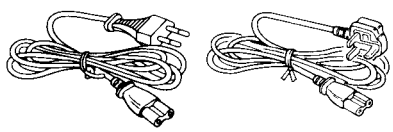
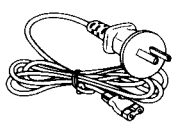
■ ACCESSORIES

AC power supply cord..... 1 pc.
[RJA0019-2K (E, EG, G)] [VJA0733 (EB)]



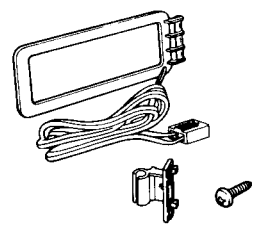
[RJA0036-K (GN)]



FM indoor antenna ..... 1 pc.
(RSA0007)

Attachment plug..... 1 pc.
[SJP9009 (EB)]

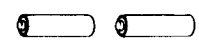
AM loop antenna set..... 1 pc.
(RSA0010)
- AM antenna holder..... 1 pc.
(RMN0244)
- Screw..... 1 pc.
(XTN3+10AFZ)



Power plug adaptor..... 1 pc.
[SJP5213-1 (G)]

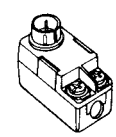
Remote control transmitter ..... 1 pc.
(RAK-SA114XH)

Batteries for remote control transmitter..... 2 pcs.
("AAA", R03)



Note: These are available on sale route.

Antena plug..... 1 pc.
[RFE0014 (G, GN)]



■ CAUTIONS FOR AC MAINS LEAD

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ◈ or the BSI mark ♆ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

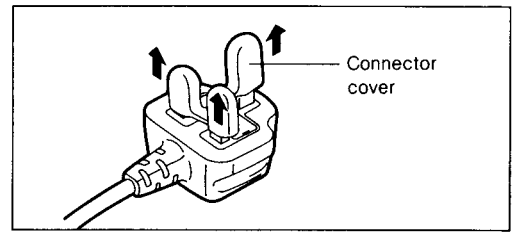
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol ⏚ .

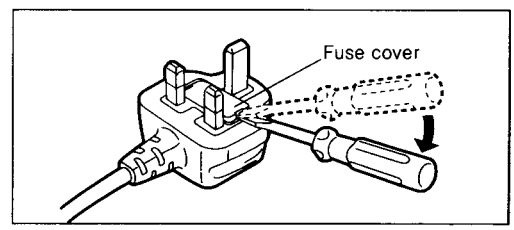
Before use

Remove the connector cover as follows.

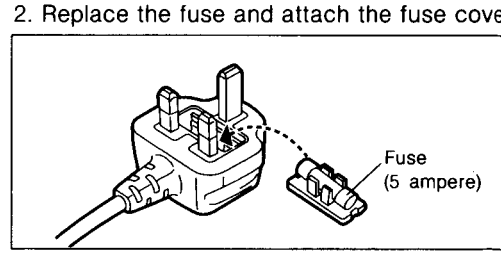


How to replace the fuse

1. Remove the fuse cover with a screwdriver.



2. Replace the fuse and attach the fuse cover



[For (GN) area.]

THIS TUNER/RECEIVER IS CAPABLE OF RECEIVING THE NEW AM STEREO BROADCASTS FROM THE AM BAND RADIO STATIONS. HOWEVER LIKE MANY TUNERS AND RECEIVERS CURRENTLY AVAILABLE ON THE MARKET IT WILL REPRODUCE THIS AM STEREO SIGNAL ONLY IN AM MONO, WHICH, IN EFFECT, IS OF NO LESSER QUALITY THAN YOUR EXISTING AM MONO TUNER/RECEIVER.

■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

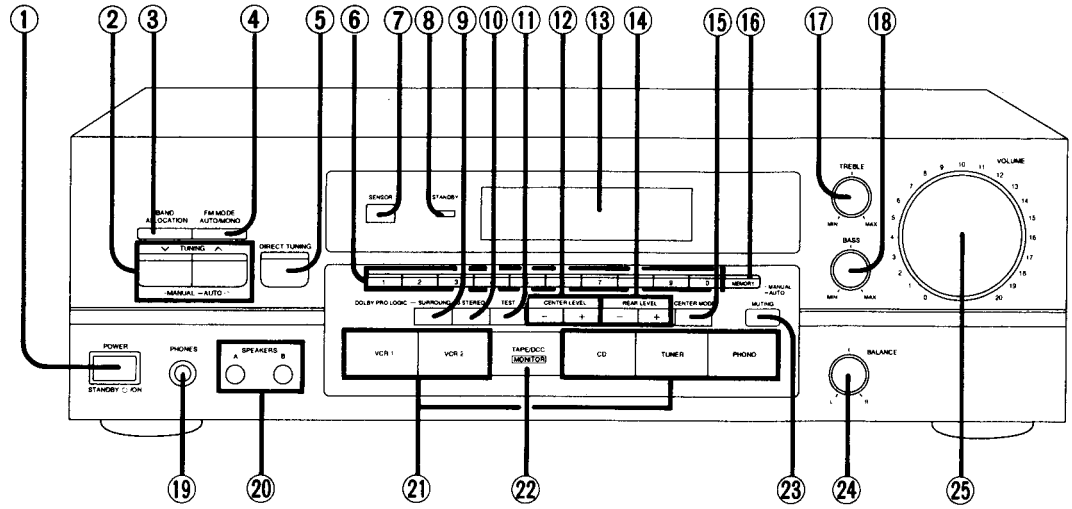
If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

■ FRONT PANEL CONTROLS



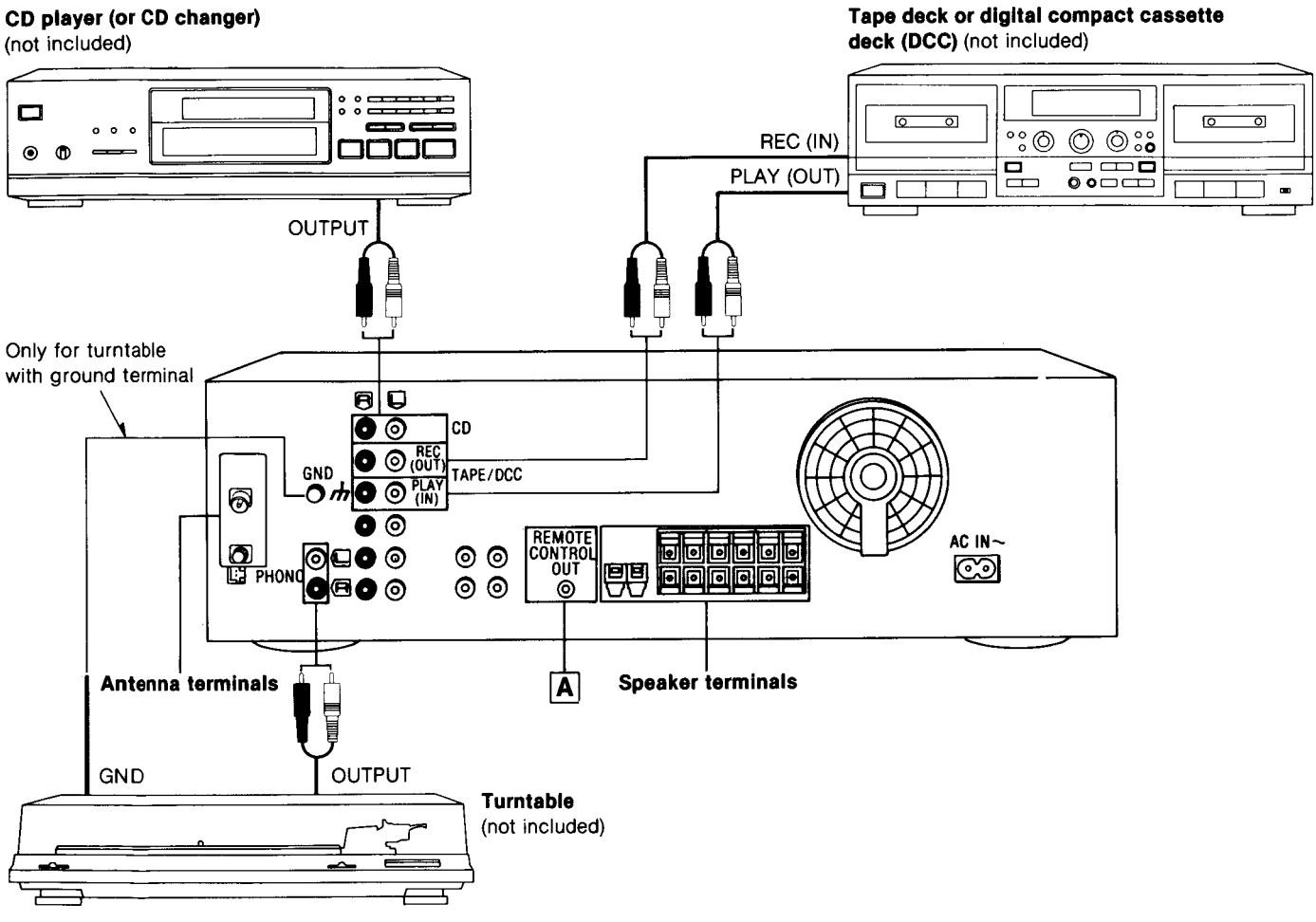
No.	*Name*
①	**Power "STANDBY ⏻ /ON" switch (POWER, STANDBY ⏻ /ON)** Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
②	**Tuning control (TUNING)**
③	**Band select button (BAND)**
④	**FM mode select button (FM MODE)**
⑤	**Direct tuning button (DIRECT TUNING)**
⑥	**Numeric buttons (1 – 0)**
⑦	**Remote control signal receptor (SENSOR)**
⑧	**"STANDBY" indicator** When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.
⑨	**DOLBY PRO LOGIC SURROUND ON/OFF button (SURROUND)**
⑩	**DOLBY PRO LOGIC 3 STEREO ON/OFF button (3 STEREO)**
⑪	**Test signal ON/OFF button (TEST)**

No.	*Name*
⑫	**Center level adjust button (CENTER LEVEL)**
⑬	**Display**
⑭	**Rear level adjust button (REAR LEVEL)**
⑮	**Center mode select button (CENTER MODE)**
⑯	**Memory button (MEMORY)**
⑰	**Treble control (TREBLE)**
⑱	**Bass control (BASS)**
⑲	**Headphone jack (PHONES)**
⑳	**Speaker select buttons (SPEAKERS)**
㉑	**Input select buttons**
㉒	**Tape/DCC monitor button (TAPE/DCC MONITOR)**
㉓	**Muting button (MUTING)**
㉔	**Balance control (BALANCE)**
㉕	**Volume control (VOLUME)**

■ EQUIPMENT CONNECTIONS

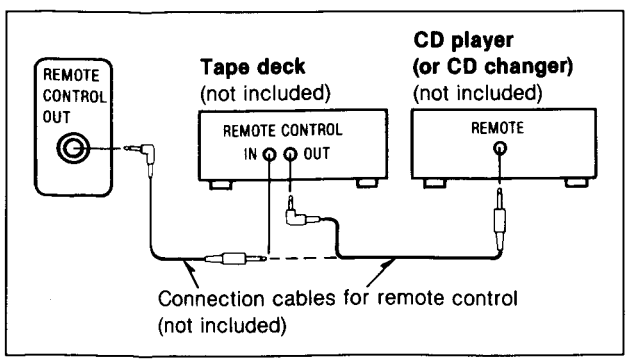
Connecting audio equipment

Stereo connection cable (not included)
White (L)
Red (R)



A "REMOTE CONTROL OUT" terminal

Connect the connection cable for the remote control to a Technics tape deck and/or CD player (or CD changer) which has the appropriate remote control terminal as shown below. If a tape deck is not being used, the CD player (or CD changer) can be connected directly (dotted line).



For a CD player (or CD changer) with a remote control sensor the above connection is not necessary.

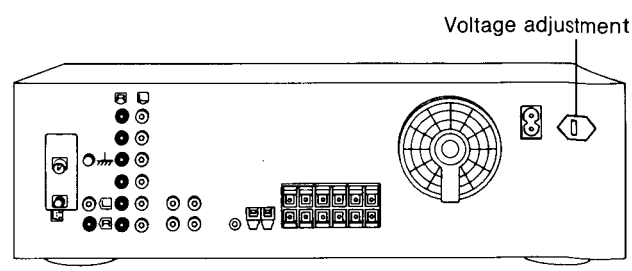
To set the power voltage

[For (G) area only.]

Set the voltage adjustment to the voltage setting for the area in which the unit will be used.

Note

Note that this unit will be seriously damaged if this setting is not made correctly.



Connecting video equipment

Stereo connection cable (not included)
White (L)
Red (R)

Second VCR (for playback only)
(not included)

Monitor TV
(not included)

Video connection cables
(not included)

AUDIO OUT
VIDEO OUT
VIDEO IN

TV MONITOR
VCR2 IN
OUT
VCR1 IN
IN
IN OUT
AUDIO
VIDEO
AC IN~

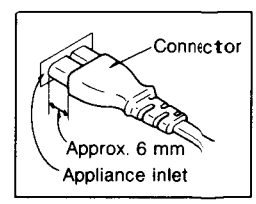
Cooling fan
The cooling fan operates at high power output levels only.

Video connection cables
(not included)

AUDIO IN
AUDIO OUT
VIDEO OUT
VIDEO IN

VCR
(not included)

[For except (GN) area only.]



Even when the connector is perfectly inserted, the front part of the connector jut out as shown in the drawing. However there is no problem using the unit.

AC power supply cord
(included)

Connect this cord after all other cables and cords are connected.

Household AC outlet

To connect a video deck with 21 pin scart terminal

This unit

VCR (not included)

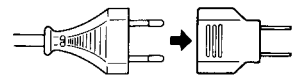
AV IN

AUDIO IN
AUDIO OUT
VIDEO OUT
VIDEO IN

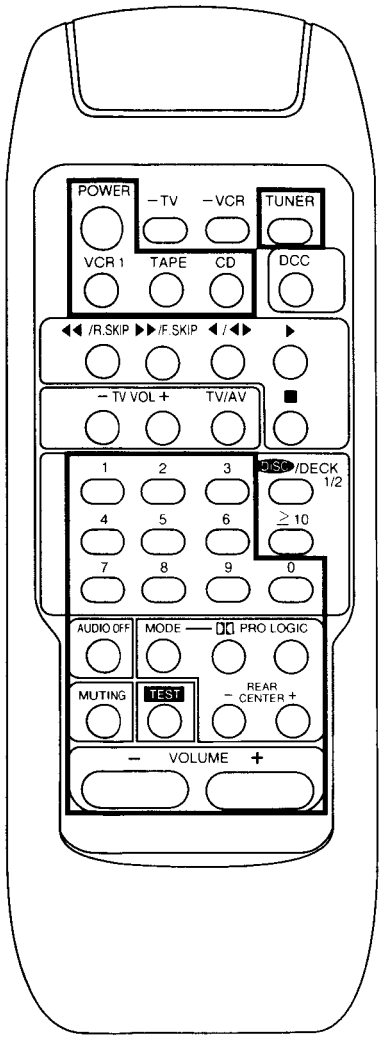
21 pin scart cable (not included)

[For (EB) area only.]
BE SURE TO READ THE CAUTION FOR THE AC POWER SUPPLY CORD ON PAGE 2 BEFORE CONNECTION.

[For (G) area only.]
If the power plug will not fit your socket, use the power plug adaptor (included).



■ REMOTE CONTROL OPERATION



To turn the unit ON/OFF	POWER ○
To select an input source	TUNER ▭ CD ○ TAPE ○ VCR 1 ○
To select the Dolby Pro Logic mode	MODE — PRO LOGIC ○ Changes as follows each time the button is pressed. → SURROUND → 3 STEREO → (OFF)
To adjust the output level of the rear speakers	When the SURROUND mode is ON ○ ○ – REAR +
To adjust the output level of the center speaker	When the 3 STEREO or SURROUND mode is ON – CENTER + ○ ○
To output a test signal	When the 3 STEREO or SURROUND mode is ON TEST ○ Press once more to stop the test signal.
To mute the sound level	MUTING ○ Press once more to return to the original volume.
To adjust the volume level	– VOLUME + ▭ ▭
If your unit is equipped with the New Technics Remote Control System (see below)	
To turn the system OFF	AUDIO OFF ○

To listen to radio broadcasts

TUNER ▭ ➡ 1 2 3 / 4 5 6 / 7 8 9 0

Specify the preset channel using the numeric button(s).

(Example: Channel 12)
1 ▭ ➡ 2 ▭
Within 2 sec.

■ BEFORE REPAIR AND ADJUSTMENT

Disconnect AC power, Discharge both Power Supply Capacitors C703 and C704 (63V 6800μF/75V 7500μF), C705 and C706 (50V 3300μF) through a 10Ω, 5W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may distroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at 50Hz/60Hz in NO SIGNAL mode should be shown below with respect to supply voltage AC 230V/240V.

Power supply voltage	AC 230V		AC 240V		AC 110–127V		AC 220–240V	
Consumed current 50/60Hz	50Hz	140~400mA	50Hz	150~420mA	50Hz	300~800mA	50Hz	150~420mA
	60Hz	112~320mA	60Hz	120~336mA	60Hz	240~640mA	60Hz	120~336mA

■ DISASSEMBLY INSTRUCTIONS

■ OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT PROCEDURES

NOTE

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**
4. **Illustrated screws are equivalent to actual size.**
5. **[ ] indicates parts No.**

• Contents

1. Checking for the volume P.C.B.,tuner P.C.B., IN/OUT terminal P.C.B. and operation P.C.B. ..... page. 8.
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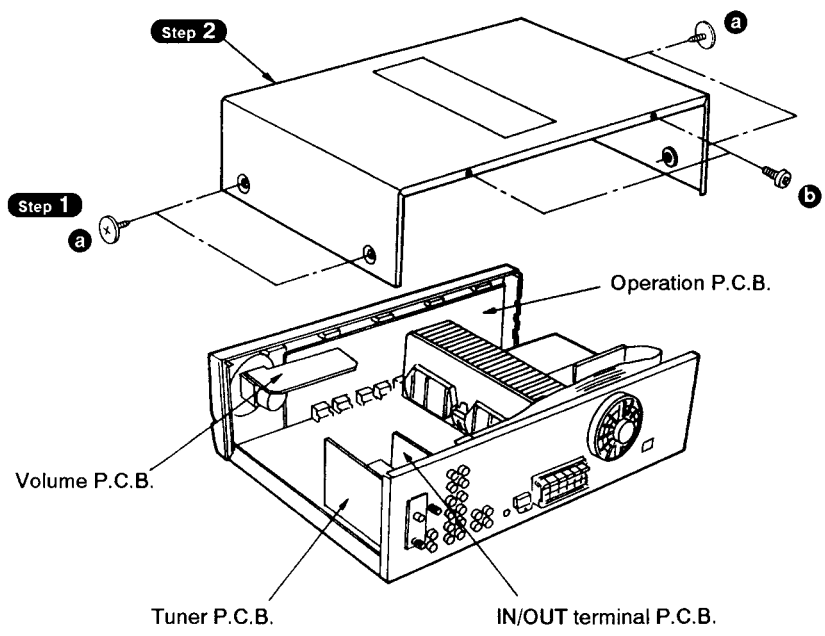
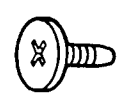
3. Replacement for the power IC and regulator transistor ..... 10.

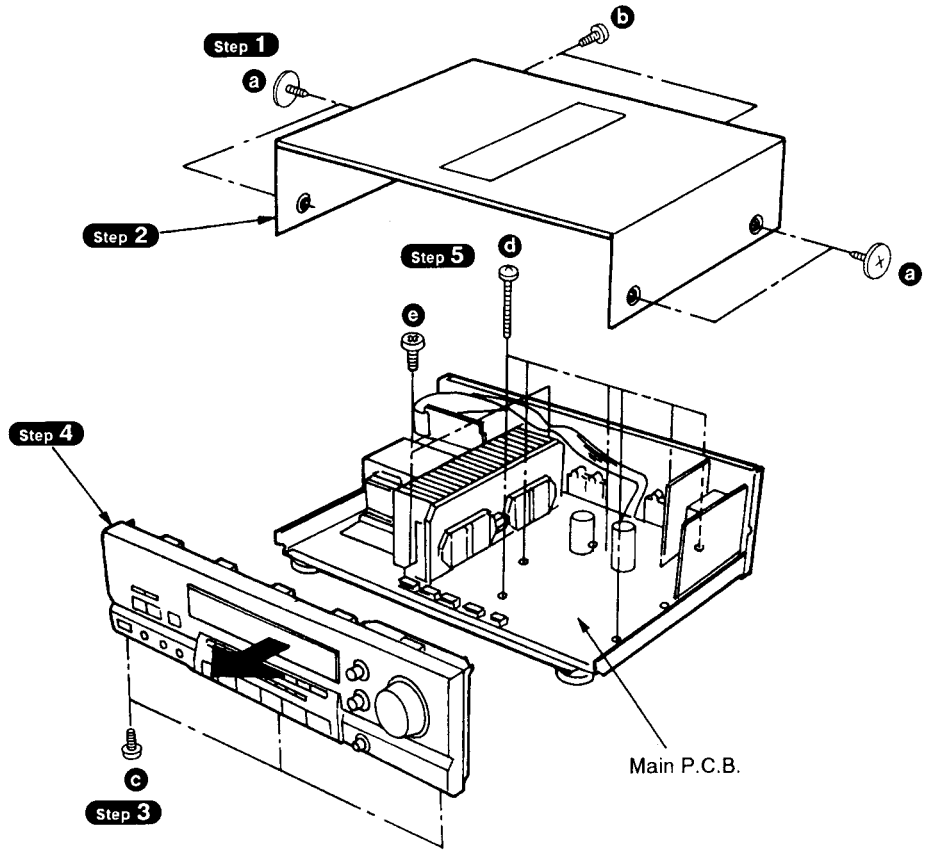
1. Checking for the volume P.C.B.,tuner P.C.B., IN/OUT terminal P.C.B. and operation P.C.B.

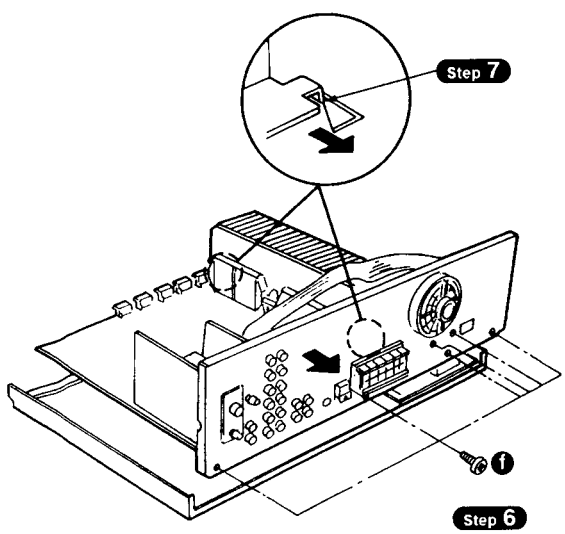


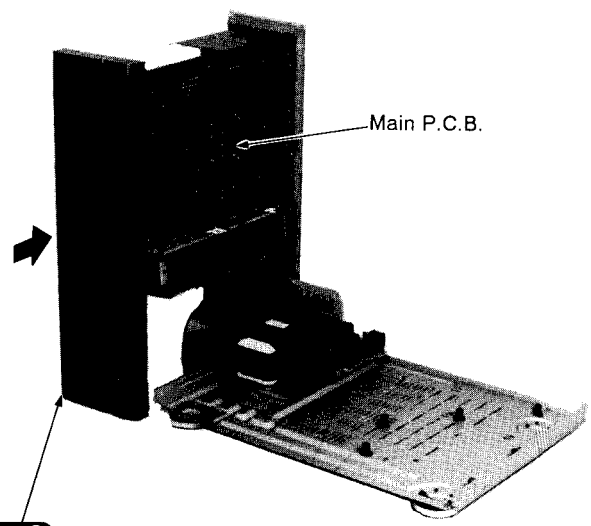

[RHD30035-K-1] (Black)

[XTBS3+8JF-1] (Black)

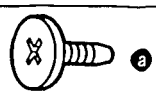
2. Checking for the main P.C.B.



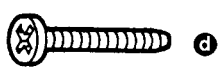




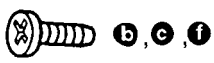
Reinstall the front panel ass'y to the main P.C.B..



[RHD30035-K1] (Black)



[XTB3+20JFZ] (Black)



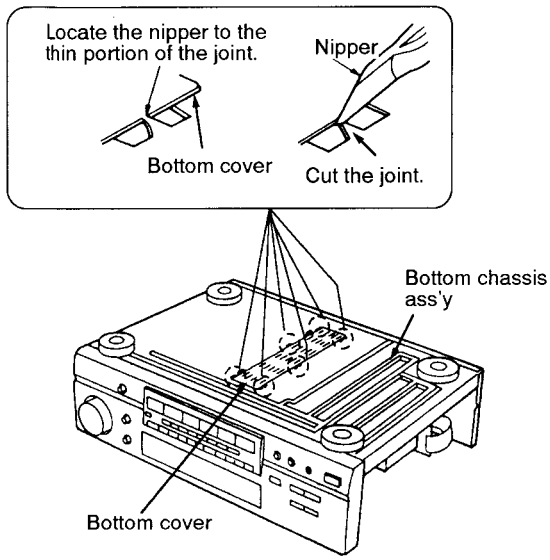
[XTBS3+8JFZ1] (Black)

[XTB3+8JFZ] (Black)

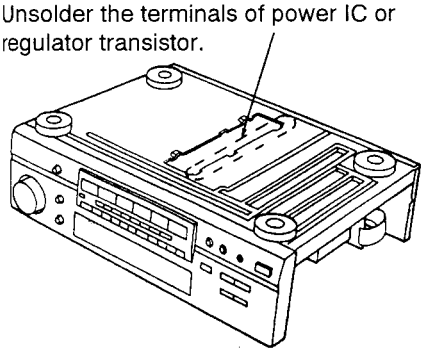
3. Replacement for the power IC and regulator transistor

Step 1 Follow the disassembly procedure described in item 1 on page 8.

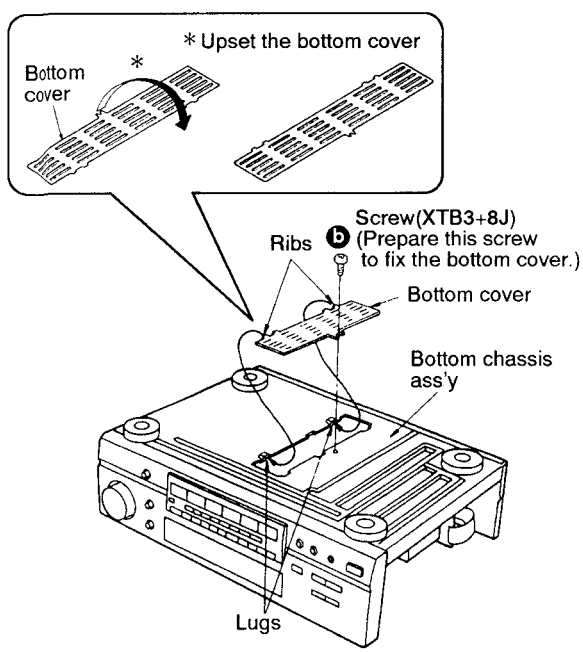
Step 2 Cut the joints as shown below.(6 portions)



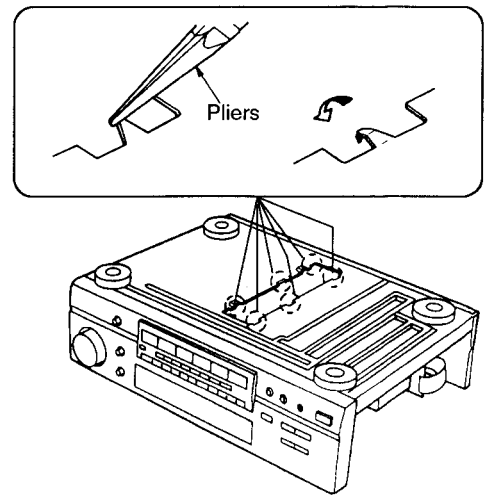
Step 4 Unsolder the terminals of power IC or regulator transistor.



Step 7 Fix the bottom cover with screw.

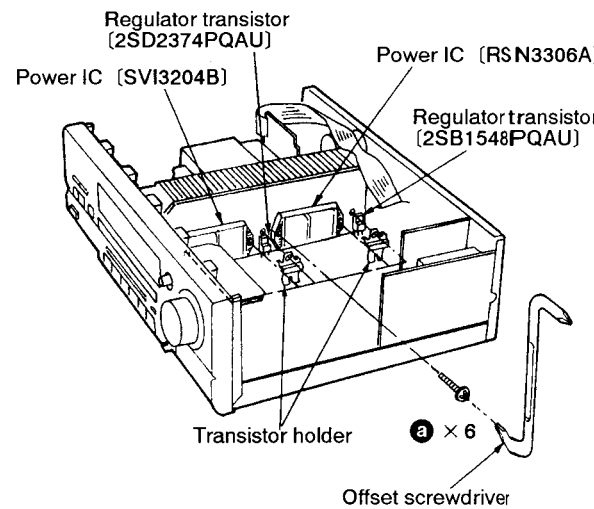


Step 3 Fold the joints.(6 portions)



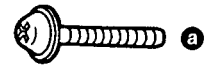
Step 5 Remove the 6 screws.

Step 6 Remove the transistor holder.



CAUTION

- After replacing the power IC or regulator transistor, apply a sufficient quantity of compound grease (RFKX0002/SZZ0L15) between the heat sink and the power IC or regulator transistor(Radiation of power IC and regulator transistor).
- Tighten enough the screws (ⓐ) after replacing the power IC or regulator transistor. Otherwise, the heat radiation works little.
- When installing or removing the power IC or transistor holder, be sure to use an offset screwdriver.



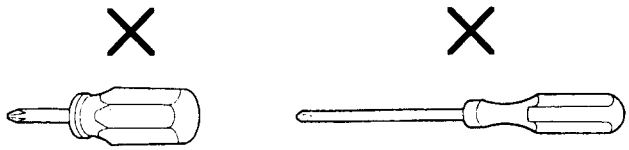
(XTW3+15T)

(Prepare this screw to fix the bottom cover.)

(XTB3+8J) (Black)

CAUTION:

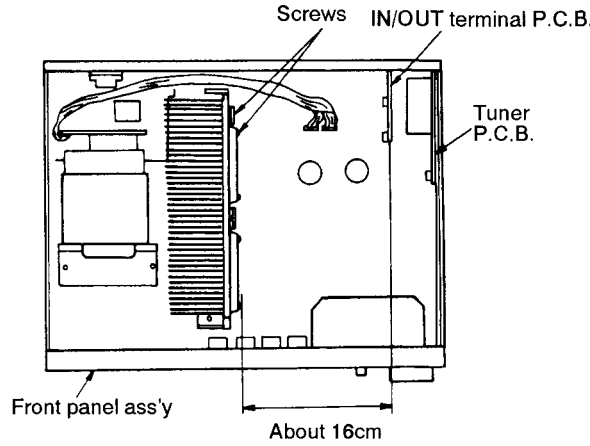
1. A long straight screwdriver cannot be used for removal or mounting since its long grip interferes with the neighboring P.C.B.(See Fig.1)
2. A short straight screwdriver may be used for removal, but cannot be used for mounting because the limited space in the unit will not allow sufficient tightening torque. (See Fig.2)



A short straight screwdriver　　A long straight screwdriver

Fig.2

3. Insufficient tightening will cause poor heat dissipation from the power IC and regulator transistor and, in the worst case, may lead their thermal breakdown. (See Fig.2)

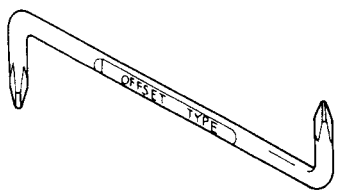


(A long straight screwdriver cannot be used.)

Fig.1

——OFFSET SCREWDRIVER——

• The PROTO offset screwdriver No.34-¼ is recommended for use in the application above.



No.	⊕	⟵ L ⟶
34¼	1 & 2	4¾″

• The address of PROTO International Sales is as follows.

Internatiotal Sales

International Sales Office
Stanley-Proto Industrial Tools
14117 Industrial Park Blvd.
Covington, GA 30209 U.S.A.
Fax: 706-786-4387
Phone: 706-787-3800

Australia, New Zealand & South Pacific
Stanley-Proto Industrial Tools
P.O.Box 10
400 Whitehorse Road
Nunrweding 3131
Victoria, Australia
Fax: 61-3-894-1173
Phone: 61-3-878-9244

Singapore, Indonesia, Philippines, Korea, Hong Kong, Malaysia, China.
Stanley-Proto Asia Pacific
12 Gul Drive
Singapore 2262
Fax: 65-861-3206
Phone: 65-862-0883

Thailand
Stanley-Proto Thailand Ltd.
1017 Moo 13 Bangnatrad Highway, Tambol Bankaew
Amphur Bangplee
Samutprakarn, Thailand
Fax: 66-2-316-6071
Phone: 66-2-316-8655

Japan
Stanley Works Japan
2-7-16 Hyakunin-Cho
Shinjuku-ku
Tokyo 160 Japan
Fax: 81-3-3360-8456
Phone: 81-3-3360-8458

Mexico
Herramientas Stanley S.A. DE C.V.
Apartado Postal 675
72030 Puebla, Pue, Mexico
Fax: 52-22-494-4880
Phone: 52-22-495-300

South & Central America, Puerto Rico, The Caribbian
Stanley Inter-America
2101 N.W. 84th Ave.
Miami, Florida 33122
Fax: 305-594-4261
Phone: 305-591-3828

Europe
Stanley-Proto Europe
Woodside, Sheffield
539PD
England
Fax: 44-742-739-038
Phone: 44-742-768-888

Canada
Stanley-Proto Canada
1100 Corporate Drive
Burlington, Ontario
Canada, L7L 5R6
Fax: 416-335-0075
Phone: 416-335-0075

Middle East, Mediterranean & Africa
Stanley-MEMA
Cory House The Ring
Bracknell Berkshire
RG 12 1A2
England
Fax: 44-344-485-526
Phone: 44-344-518813

■ FAN MOTOR TROUBLESHOOTING GUIDE

The Model SA-GX470 employ fan motor error sensing electronics.
If the cooling fan is not operation and "OVER LOAD" is displayed on the FL display, check the fan motor and its driving circuit.

"OVER LOAD" is displayed on the FL display.

Is the air cooling path blocked or the fan motor jammed by any external obstacle?

YES → Remove the obstacle.

NO

Remove the fan from the unit.

Is the fan motor's DC resistance 20~30Ω?

NO → Fan motor failure
Short circuit: DC resistance below 5Ω
Open circuit: DC resistance over 1kΩ

YES

Reinstall the fan on the unit.

Are the terminal voltage of Q772 and Q773 normal in both active and inactive states of the fan motor? (see table1.)

NO → Check the integrity of Q771, Q772, Q773 and the fan motor driving circuit. (see fig. 1.)

YES

(Voltage table)

		fan. off	fan. on
Q771	E	0V	0V
	C	−0.65V	−0.1V
	B	0V	−0.65V
Q772	E	0V	0V
	C	−0.1V	−8.2V
	B	−0.65V	−0.1V
Q773	E	0V	−7.5V
	C	−14V	−13.2V
	B	−0.1V	−8.2V

(Table 1)

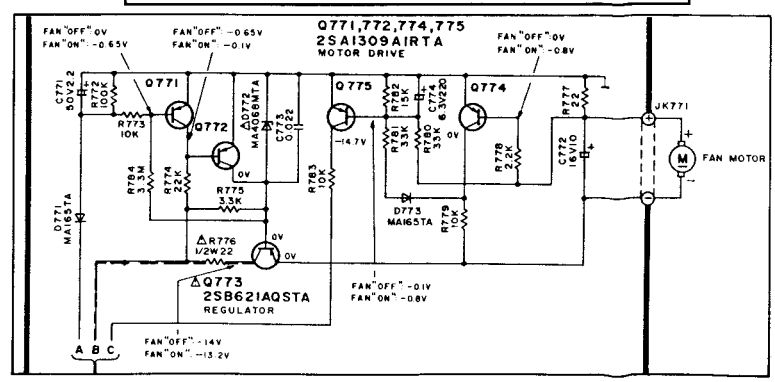


Fig. 1

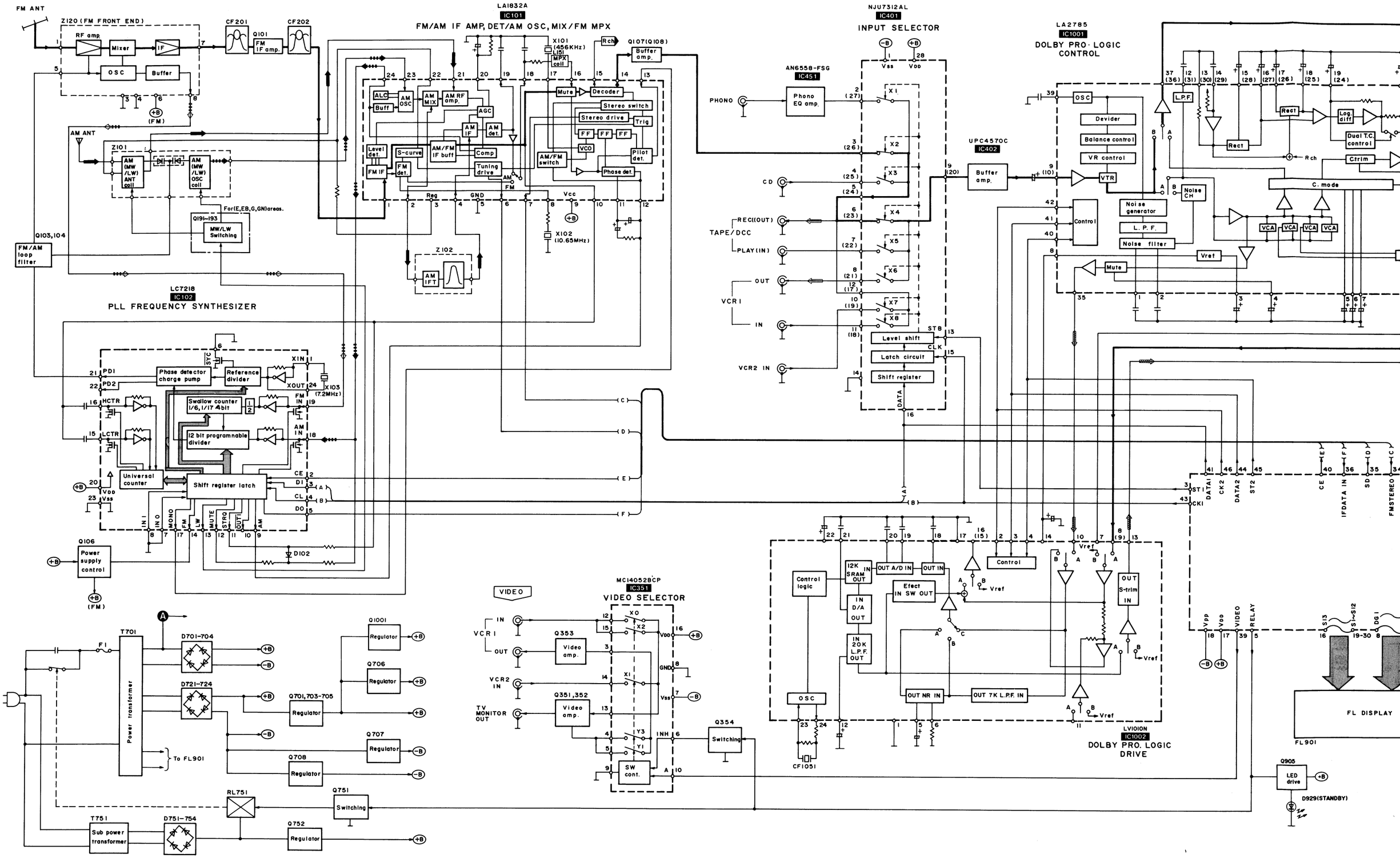
Is an audio signal present at pins ⑦ and ⑩ of IC601 or pins ① and ④ of IC602

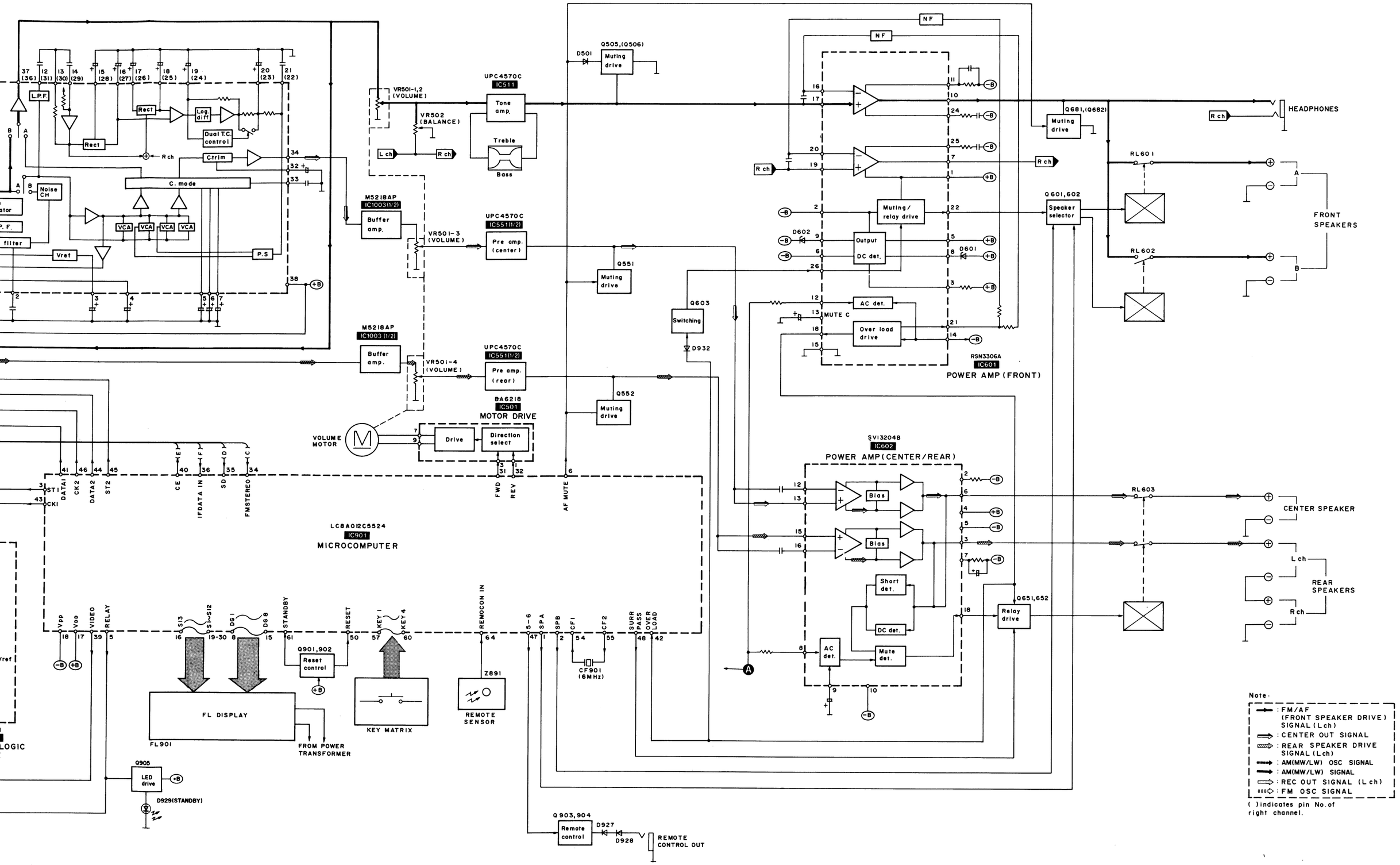
NO → The power IC (IC601 or IC602) is defective.

YES

The fan motor, power ICs and fan driver are functioning normally.

■ BLOCK DIAGRAM





Note:

- FM/AF (FRONT SPEAKER DRIVE) SIGNAL (Lch)
- CENTER OUT SIGNAL
- REAR SPEAKER DRIVE SIGNAL (Lch)
- AM(MW/LW) OSC SIGNAL
- AM(MW/LW) SIGNAL
- REC OUT SIGNAL (L ch)
- FM OSC SIGNAL

( )indicates pin No.of right channel.

■ SCHEMATIC DIAGRAM (Parts list on pages 40～42, 45～48.)

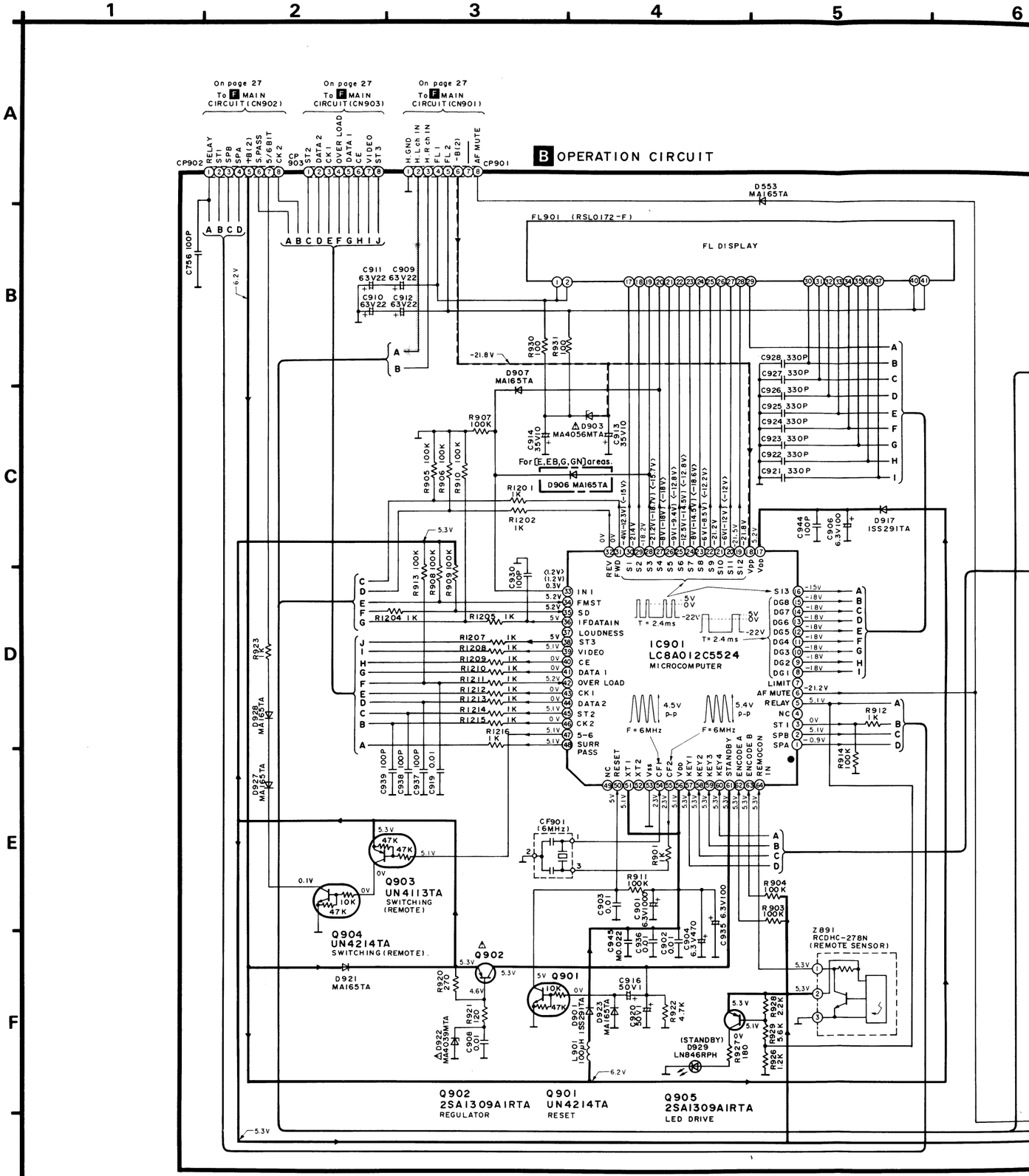
(This schematic diagram may be modified at any time with the development of new technology.)

Note 1:

- **S701** : Voltage adjustment switch in "**240V**" position. (110V ↔ 127V ↔ 220V ↔ 240V) [For (G) area only.]
- **S946** : Numeric (5) switch.
- **S947** : Center level adjust (CENTER LEVEL (−)) switch.
- **S948** : Test signal ON/OFF (TEST) switch.
- **S949** : Numeric (4) switch.
- **S950** : Numeric (6) switch.
- **S951** : Center level adjust (CENTER LEVEL (+)) switch.
- **S952** : Numeric (7) switch.
- **S953** : Rear level adjust (REAR LEVEL (−)) switch.
- **S954** : Input select (CD) switch.
- **S955** : Input select (TUNER) switch.
- **S956** : Center mode select (CENTER MODE) switch.
- **S957** : Numeric (9) switch.
- **S960** : Rear level adjust (REAR LEVEL (+)) switch.
- **S961** : Numeric (8) switch.
- **S962** : Numeric (0) switch.
- **S964** : Input select (PHONO) switch.
- **S966** : Memory (MEMORY) switch.
- **S967** : Muting (MUTING) switch.
- **S970** : Tape/DCC monitor (TAPE/DCC [MONITOR]) switch.
- **S971** : Input select (VCR 2) switch.
- **S972** : Input select (VCR 1) switch.
- **S973** : Speaker select (SPEAKER B) switch.
- **S974** : FM mode select (FM MODE) switch.
- **S975** : Band select (BAND) switch.
- **S976** : Direct tuning (DIRECT TUNING) switch.
- **S977** : Tuning control (TUNING ∨) switch.
- **S978** : Power "STANDBY ⏻ /ON" (POWER, STANDBY ⏻ /ON) switch.
- **S980** : Dolby pro logic 3 stereo ON/OFF (3 STEREO) switch.
- **S981** : Speaker select (SPEAKER A) switch.
- **S982** : Dolby pro logic surround ON/OFF (SURROUND) switch.
- **S983** : Numeric (3) switch.
- **S984** : Numeric (2) switch.
- **S985** : Numeric (1) switch.
- **S987** : Tuning control (TUNING ∧) switch.
- Signal line
  - : FM OSC signal
  - : AM (MW/LW) OSC signal
  - : Rec out signal (Lch)
  - : Rear speaker drive signal (Lch)
  - : Positive voltage lines
  - : Negative voltage lines
  - : FM signal
  - : AM (MW/LW) signal
  - : AF signal (Lch)
  - : Center speaker drive signal (Lch)

- Important safety notice
  Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used as occation calls. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- All voltage values shown in circuitry are DC voltage in FM signal (Stereo signal) reception mode.
- ＊Figures in ( ) stand for DC-voltage in AM (MW) signal reception mode.
- ＊Figures in 〈 〉 stand for DC-voltage in LW signal reception mode.

- **Caution!**
  IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.
- Cover the parts boxes made of plastics with alminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the legs of IC or LSI with the fingers directly.



5 6 7 8 9 10 11 12 13 14

C VOLUME CIRCUIT

On page 28 To F MAIN CIRCUIT (CN904)

On page 28 To F MAIN CIRCUIT (CN905)

CP904 IF DATA SD SM ST +B(L) C.IN D.GND C.OUT

CP905 L ch IN R ch IN S.GND R ch OUT L ch OUT S.OUT +B(L) S.IN

IC551 UPC4570C PRE AMP (CENTER/REAR)

IC501 BA6218 MOTOR DRIVE

DIRECTION SELECT

DRIVE

VR501-4 100K(B)

VR501-3 100K(B)

VR501-2 100K(B)

VR501-1 (VOLUME) 100K(B)

CP502 CN502

CP501 CN501

IC511 UPC4570C TONE AMP

Q505, 506 2SC3327ABTP MUTING

Q681, 682 2SC3327ABTP MUTING

D HEADPHONES JACK CIRCUIT

CP601 CN601 HP601 HEADPHONES

E501

D553 MA165TA

D917 1SS291TA

D501 MA165TA

Z891 RCDHC-278N (REMOTE SENSOR)

(BALANCE) VR502 100K(G)

S946 (5) S947 (CENTER LEVEL-) S948 (TEST) S949 (4)

S950 (6) S960 (REAR LEVEL+) S970 (TAPE/DCC MONITOR) S980 (3STEREO)

S951 (CENTER LEVEL+) S961 (8) S971 (VCR2) S981 (SPEAKERS A)

S952 (7) S962 (0) S972 (VCR1) S982 (SURROUND)

S953 (REAR LEVEL-) S973 (SPEAKERS B) S983 (3)

S954 (CD) S964 (PHONO) S974 (FM MODE) S984 (2)

S955 (TUNER) S975 (BAND) S985 (1)

S956 (CENTER MODE) S966 (MEMORY) S976 (DIRECT TUNING) S986 (TUNING ∧)

S957 (9) S967 (MUTING) S977 (TUNING ∨) S987 (TUNING ∧)

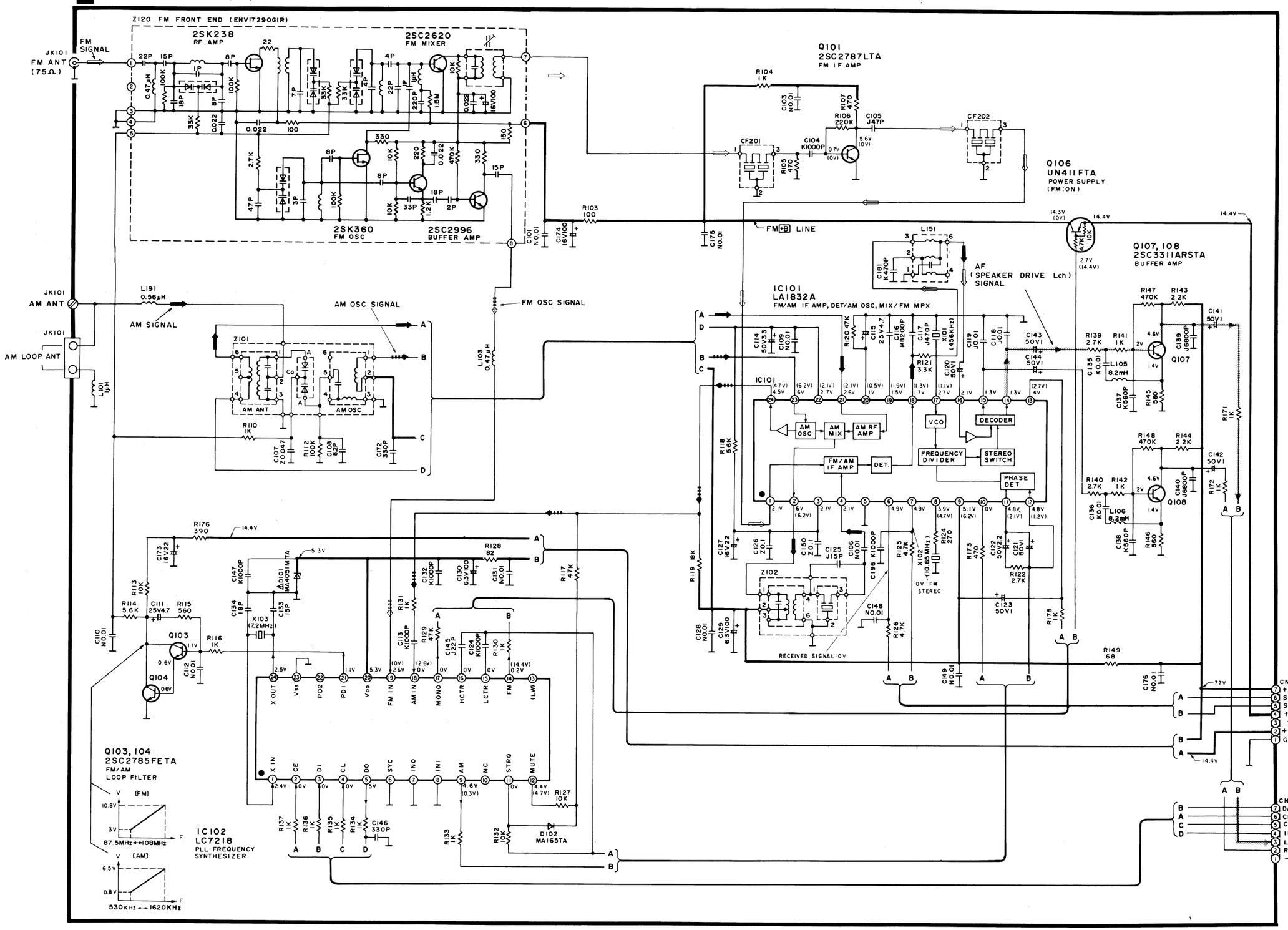
S978 (POWER)

A TUNER CIRCUIT For [E,EB,G,GN] areas.

Z120 FM FRONT END (ENV17290GIR)
2SK238 RF AMP
2SC2620 FM MIXER
2SK360 FM OSC
2SC2996 BUFFER AMP
JK101 FM ANT (75Ω)
FM SIGNAL
Q101 2SC2787LTA FM IF AMP
Q106 UN411FTA POWER SUPPLY (FM:ON)
Q107,108 2SC3311ARSTA BUFFER AMP
FM +B LINE
FM OSC SIGNAL
AM (LW/MW) OSC SIGNAL
JK101 AM ANT
JK101 AM LOOP ANT
AM (LW/MW) SIGNAL
L191 0.68μH
L101 0.68μH
Z101
MW ANT
MW OSC
LW ANT
LW OSC
Q191–193 2SC3311ARSTA LW/MW SWITCHING
Q191
Q192
Q193
V [FM] 10.8V 3V 87.5MHz ↔ 108MHz F
IC101 LA1832A FM/AM IF AMP, DET/AM OSC, MIX/FM MPX
AF (SPEAKER DRIVE/Lch) SIGNAL
AM OSC
AM MIX
AM RF AMP
FM/AM IF AMP
DET.
VCO
FREQUENCY DIVIDER
DECODER
STEREO SWITCH
PHASE DET.
RECEIVED SIGNAL-0V
0V FM STEREO
Q103 2SA1162 (E)
Q104 2SC2785 (E)
Q103,104 2SC2785FETA FM/AM (LW/MW) LOOP FILTER
X103 (7.2MHz)
IC102 LC7218 PLL FREQUENCY SYNTHESIZER
X IN CE DI CL DO SYC INO INI AM NC STRQ MUTE
X OUT Vss PD2 PD1 Vdd FM IN AM IN MONO HCTR LCTR FM LW
V (LW) 5.4V 1V 144KHz ↔ 288KHz F
V (MW) 6.5V 0.8V 530KHz ↔ 1620KHz F
D102 MA165TA
CN101
+B(3) SD ST EYE +B(4) — +B(4) GND
To F MAIN CIRCUIT (CP101) On page 27
CN102
DATAI CE I CK I IFDATA Lch OUT Rch OUT —
To F MAIN CIRCUIT (CP102) On page 27

24 25 26 27 28 29 30 31 32 33

A TUNER CIRCUIT For [EG] area.


Z120 FM FRONT END (ENV1729OGIR)
2SK238 RF AMP
2SC2620 FM MIXER
2SK360 FM OSC
2SC2996 BUFFER AMP
JK101 FM ANT (75Ω)
FM SIGNAL
JK101 AM ANT
AM SIGNAL
JK101 AM LOOP ANT
L191 0.56μH
L101 1μH
Z101
AM ANT
AM OSC
AM OSC SIGNAL
FM OSC SIGNAL
L103 0.47μH
Q101 2SC2787LTA FM IF AMP
Q106 UN411FTA POWER SUPPLY (FM:ON)
FM B LINE
Q107, 108 2SC3311ARSTA BUFFER AMP
AF (SPEAKER DRIVE Lch) SIGNAL
IC101 LA1832A FM/AM IF AMP, DET/AM OSC, MIX/FM MPX
AM OSC
AM MIX
AM RF AMP
VCO
DECODER
FM/AM IF AMP
DET.
FREQUENCY DIVIDER
STEREO SWITCH
PHASE DET.
Z102
X102 (10.85MHz)
0V FM STEREO
RECEIVED SIGNAL 0V
Q103, 104 2SC2785FETA FM/AM LOOP FILTER
IC102 LC7218 PLL FREQUENCY SYNTHESIZER
X103 (7.2MHz)
D101 MA4051MTA
D102 MA165TA
V (FM) 10.8V 3V 87.5MHz ↔ 108MHz F
V (AM) 6.5V 0.8V 530KHz ↔ 1620KHz F
X OUT Vss PD2 PD1 VDD FM IN AM IN MONO HCTR LCTR FM (LW)
X IN CE DI CL DO SYC INO INI AM NC STRQ MUTE
CN101 +B(3) SD ST EYE +B(4) — +B(4) GND
CN102 DATA I CE I CK I IF DATA L ch OUT Rch OUT —
To F MAIN CIRCUIT (CP101) On page 27
To F MAIN CIRCUIT (CP102) On page 27

Note 2:

- Signal line
  - : FM OSC signal
  - : AM (MW/LW) OSC signal
  - : Rec out signal (Lch)
  - : Rear speaker drive signal (Lch)
  - : Positive voltage lines
  - : Negative voltage lines
  - : FM signal
  - : AM (MW/LW) signal
  - : AF signal (Lch)
  - : Center speaker drive signal (Lch)
- Important safety notice
  Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used as occation calls. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- All voltage values shown in circuitry are DC voltage in FM signal (Stereo signal) reception mode.
- *Figures in ( ) stand for DC-voltage in AM (MW) signal reception mode.
- *Figures in 〈 〉 stand for DC-voltage in LW signal reception mode.

- **Caution!**
  IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.
- Cover the parts boxes made of plastics with alminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the legs of IC or LSI with the fingers directly.

Power Source Circuit For [G]area.

G POWER SUPPLY CIRCUIT

Q771,772,774,775
2SAI309AIRTA
MOTOR DRIVE

Q771
Q772
Q775
Q774
R773 10K
R772 100K
C771 0.022
D771 MA165TA
R774 22K
R784 3.3M
R775 3.3K
R783 10K
R782 15K
C774 16V220
R777 22
R778 2.2K
R780 33K
D773 MA165TA
R781 33K
R779 10K
C772 16V10
△R776 1/2W22
△Q773
2SB621AQSTA
REGULATOR
JK771
M771
FAN MOTOR

△C753 25V1000
△D753
△D754
T751
C752 0.01
D751-754
ISR35200TB
△D752
△D751
D755 MA165TA
△RL751
10K
47K
Q751
UN421FTA
RELAY DRIVE
△C751 1000P
W752
A B C D E
D721-724
P3000LF
△D722
C721 0.1
△D724
△D721
△D723
W701
CN753
CN754
CN755
CN756
CN757
CN758
CN759
△T701
CN751
W7
W6
W8
W5
W1
W4
W3
W2
△F2 T1.6A
△F1 T3.15A
JK793
AC IN
(110V-127V/220V-240V)
(50/60Hz)
110V-127V
220V-240V
△S701
(VOLT. ADJ.)

I AC IN CIRCUIT

H POWER TRANSFORMER CIRCUIT

E IN/OUT TERMINAL CIRCUIT

AUDIO
JK402 L ch / R ch — CD
JK402 L ch / R ch — REC (OUT)
JK403 L ch / R ch — TAPE/DCC PLAY (IN)
JK403 L ch / R ch — V.CR2 (IN)
JK404 L ch / R ch — OUT VCR1 IN
R401 1K
R402 1K
R405 1K
R406 1K
R407 1K
R408 1K
R409 1K
R410 1K
R411 1K
R412 1K
R413 1K
R414 1K
C417 100P
C418 100P
C419 100P
C420 330P
C421 330P
C422 330P
C423 100P
C424 100P
C425 100P
C426 100P
C427 220P
C428 220P
A B C D E F
REC OUT SIGNAL (Lch)

IC401
NJU7312AL
INPUT SELECTOR
14.4V
14.3V
-14.7V
R423 1K
C401 35V4.7
C403 0.01
R426 10K
R425 10K
DATA CLK
STB GND
X1 X2 X3 X4 X5 X6 X7 X8
C402 35V4.7
C404 0.01
R424 1K
R427 10K
C405 100P
-14.8V

IC402
UPC4570C
BUFFER AMP
R415 1K
C431 16V10
C410 16V22
C411 100P
R421 100K
R417 47K
C413 16V10 (LI)
R419 100K
R416 1K
C432 16V10
C409 16V22
C412 100P
R422 100K
R418 47K
R420 100K
C414 16V10 (RI)
14.4V

CN401
CN402
CP401
CP402
B A

F MA

E401
GND
JK401 L ch / R ch — PHONO
R469 1K
C469 180P
R470 1K
C470 180P
R442 47K
R441 47K

VIDEO

JK351 IN — VCR1 OUT
VCR2 IN
TV MONITOR OUT
R351 470
R361 470
R362 47
R360 47
R365 3.3K
R364 560
R358 470
R357 47
R355 47
R354 47K
R356 3.3K
R363 3.3K
R352 470
R359 47
Q353
-5.8V
Q352
-5.8V
5.5V
-0.8V
0V
△R369 1/2W270
14.4V
IC351
MC14052BCP
VIDEO SELECTOR
SW CONT
INH Vss GND
C353 16V10
D353 MA165TA
D351 MA4056MTA
D352 MA4056MTA
C351 6.3V100
C352 6.3V100
R366 100K
△R370 1/2W270
-14.8V
Q352, 353
2SA1309AIRTA
VIDEO AMP
Q351
2SC3311AIRTA
VIDEO AMP
Q354
UN4213TA
SWITCHING
4.9V
47K
JK406
REMOTE CONTROL OUT
C89 3900P
△R440 1/2W82
R443 33
CP101
GND
+B(14V)
To A CIRCU On pa

9 10 11 12 13 14 15 16 17 18 19

F MAIN CIRCUIT (VIDEO AMP/PHONO EQ AMP/DOLBY PRO LOGIC/BUFFER AMP/REGULATOR/POWER AMP)

IC451 AN6558-FSG PHONO EQ AMP

IC1001 LA2785 DOLBY PRO LOGIC CONTROL

IC1002 LV1010N DOLBY PRO LOGIC DRIVE

IC1003 M5218AP BUFFER AMP

Q603 2SA1309AIRTA MUTING CONT.

Q1001 2SC3940AQSTA REGULATOR

CF1051 (8MHz)

PHONO L ch / R ch

CENTER SPEAKER DRIVE SIGNAL

REAR SPEAKER DRIVE SIGNAL (Lch)

(DOLBY TEST POINT)

CONTROL, OSC, DEVIDER, NOISE GENERATOR, LPF, CTRIM, MUTE, CMODE, VCA, RECT, LOG DIFF, P.S, DUAL CONTROL, BALANCE CONTROL, VR CONTROL, VR, NOISE FILTER, NOISE CH, VREF

OSC, OUT D/A IN, OUT A/D IN, OUT IN, OUT S-TRIM IN, OUT EFECT IN, CONTROL LOGIC, OUT 12K SRAM IN, IN 20K L.P.F OUT, OUT 7K L.P.F IN, CONTROL, OUT NR IN

To A TUNER CIRCUIT(CN101) On page 22,24

To A TUNER CIRCUIT(CN102) On page 22,24

To B OPERATION CIRCUIT(CP902) On page 18

To B OPERATION CIRCUIT(CP903) On page 18

To B OPERATION CIRCUIT(CP901) On page 18

To B OPERATION CIRCUIT(CP904) On page 19

To B OPERATION CIRCUIT(CP905) On page 20

△IC601
RSN3306A
POWER AMP
(FRONT)

MUTE
PROTECTION
PHASE CORRECTION
OUT DC DET.
OVER LOAD
LOAD SHORT DET.
AC IN DET.
PHASE CORRECTION

Q601,602
2SA1309AIRTA
RELAY DRIVE

Q602
-28.4V

Q601

△IC602
SV13204B
POWER AMP
(CENTER/REAR)

MUTE DET

Q552

Q551

Q551,552
2SC3311AIRTA
MUTING

Q652
2SC3311AIRTA
OVER LOAD DET.

D656
MA4047MTA

Q651
2SA1309AIRTA
RELAY DRIVE

△Q701
2SD2374PQAU
REGULATOR

D657
MA165TA

△Q703
2SC3311AIRTA
REGULATOR

△Q706
2SC3940AQSTA
REGULATOR

△Q705
2SC3311AIRTA
STABILIZER

△Q704
2SC3311AIRTA
REGULATOR

△Q708
2SB1548PQAU
REGULATOR

△Q707
2SB621AQSTA
REGULATOR

△RL601
△RL602
△RL603
D604 MA165TA
D605 MA165TA
D654 MA165TA
D606 MA165TA

JK601 Lch A Rch
JK602 Lch B Rch
JK603 Lch REAR Rch
JK604 CENTER

FRONT
SPEAKERS

E601

D701 – 704
P300D5002T

CP701A
CP701B

-14.8V

G POWER SUPPLY CIRCUIT

Q771,772,774,775
2SA1309AIRTA
MOTOR DRIVE

FAN "OFF" 0V
FAN "ON": -0.65V

FAN "OFF": -0.65V
FAN "ON": -0.1V

FAN "OFF": 0V
FAN "ON": -0.8V

Q771
Q772
Q775
Q774

△Q773
2SB621AQSTA
REGULATOR

FAN "OFF": -0.1V
FAN "ON": -0.8V

FAN "OFF": -14V
FAN "ON": -13.2V

Q751
UN421FTA
RELAY DRIVE

△T751

△RL751

W752

△Q752
2SC3940AQSTA
REGULATOR

W701

△T701

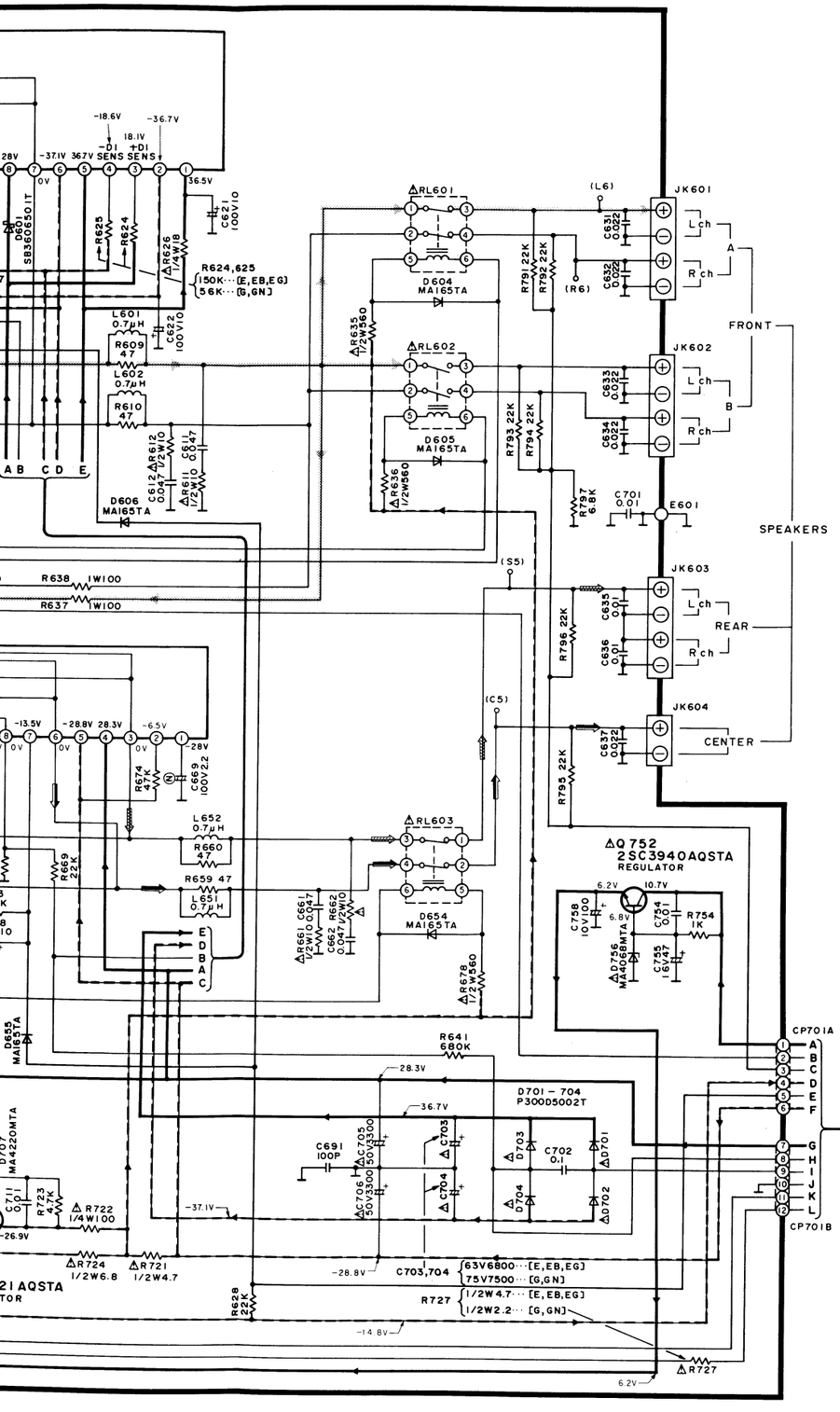
CN753
CN754
CN755
CN756
CN757
CN758
CN759

AC 54.4V
AC 49.4V
AC 43.8V
AC 27.7V
AC 2.5V
AC 4.4V

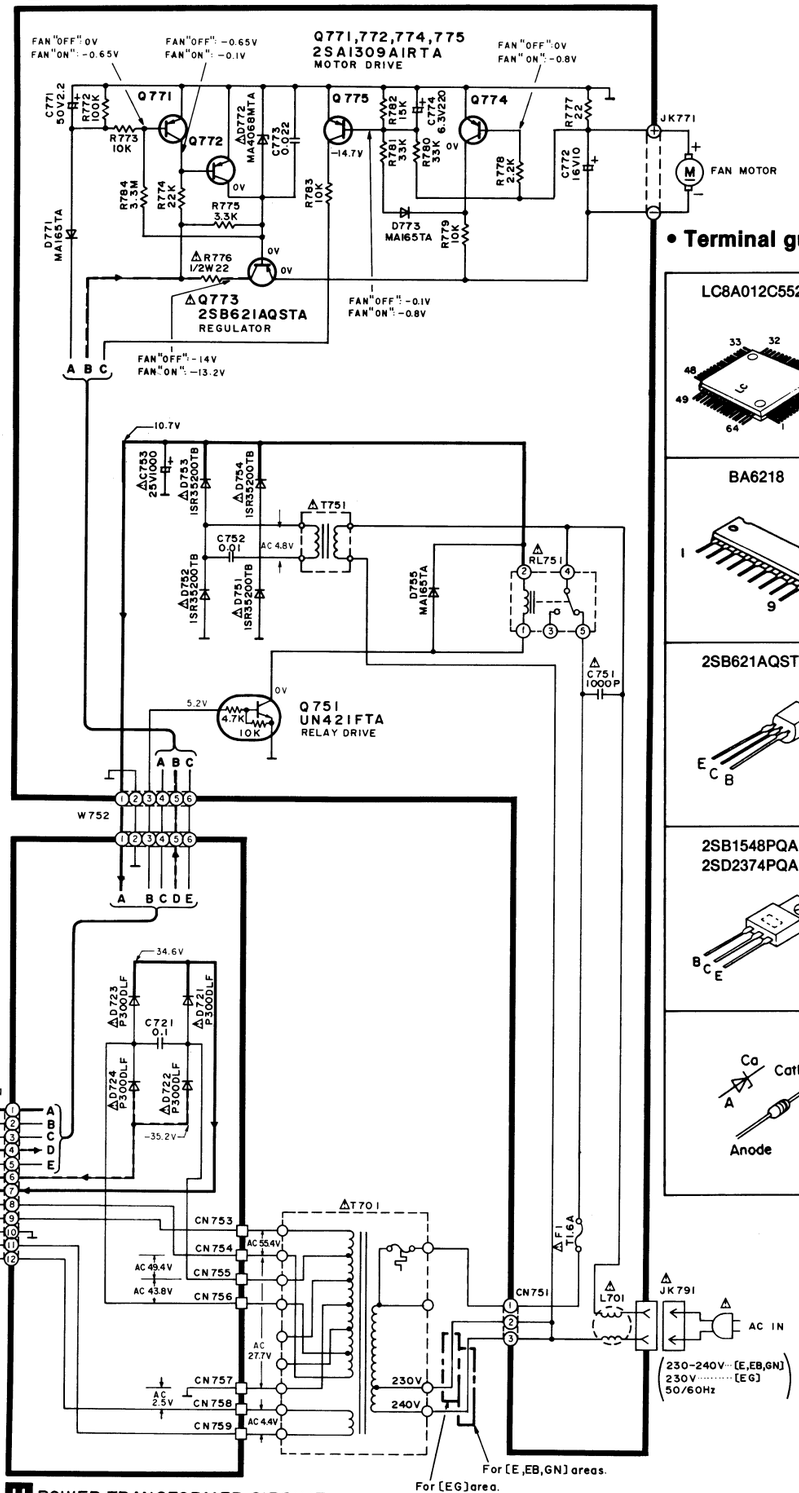
230V
240V

For [E,EB,GN] areas.
For [EG] area.

H POWER TRANSFORMER CIRCUIT



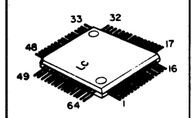
G POWER SUPPLY CIRCUIT



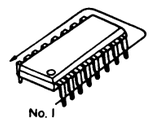
H POWER TRANSFORMER CIRCUIT

• Terminal guide of IC's, transistors and diodes

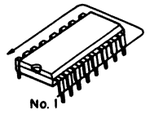
LC8A012C5524



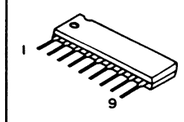
M5218AP	8 Pin
LV1010N	24 Pin
LA1832A	24 Pin
LC7218	24 Pin



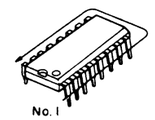
AN6558-FSG	8 Pin
LA2785	42 Pin



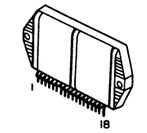
BA6218



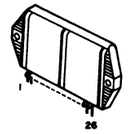
UPC4570C	8 Pin
MC14052BCP	16 Pin
NJU7312AL	28 Pin



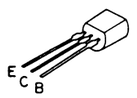
SVI3204B



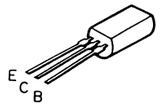
RSN3306A

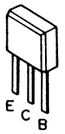


2SB621AQSTA



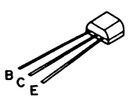
2SC3940AQSTA



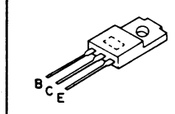


2SA1309AIRTA
2SC3311AIRTA
UN4113TA
UN421FTA
UN4213TA
UN4214TA
2SC2787LTA
2SC2785FETA
UN411FTA
2SC3311ARSTA

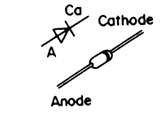
2SC3327ABTP



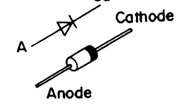
2SB1548PQAU
2SD2374PQAU



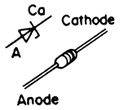
MA165TA
MA700ATA
1SS291TA
1SR35200TB



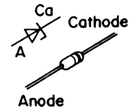
P300DLF
P300D5002T
SB3606501T



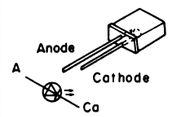
MA4039MTA
MA4047MTA
MA4056MTA
MA4062MTA
MA4068MTA
MA4075MTA
MA4051MTA



MA4100MTA
MA4150MTA
MA4220MTA



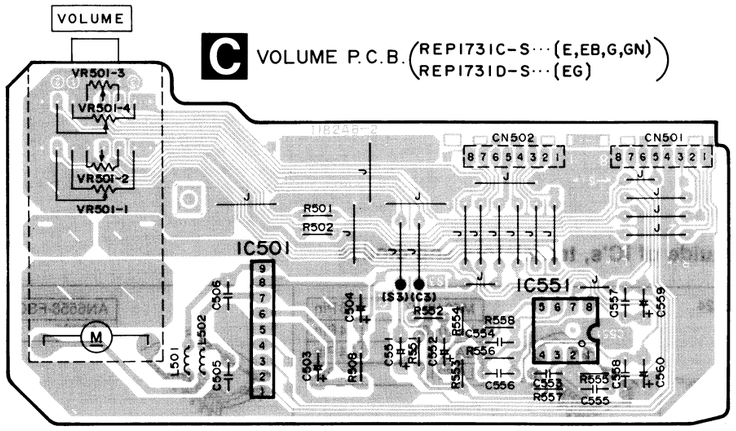
LN846RPH



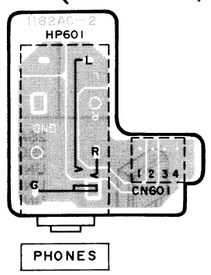
SA-GX470 SA-GX470

■ PRINTED CIRCUIT BOARDS

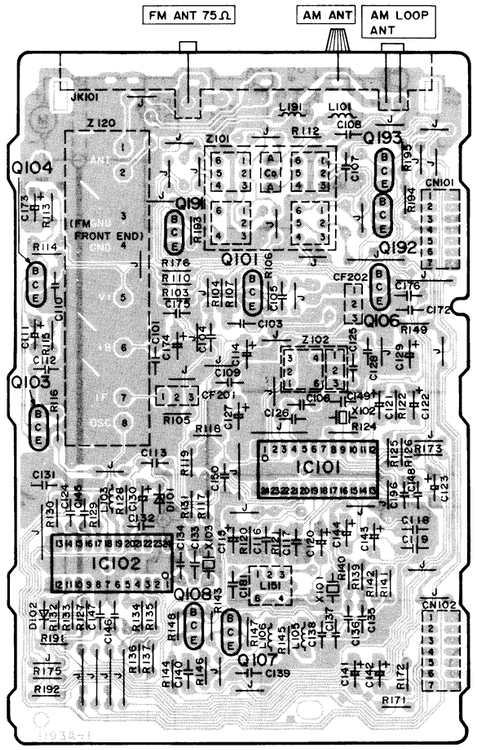
C VOLUME P.C.B. (REP1731C-S···(E,EB,G,GN) REP1731D-S···(EG))



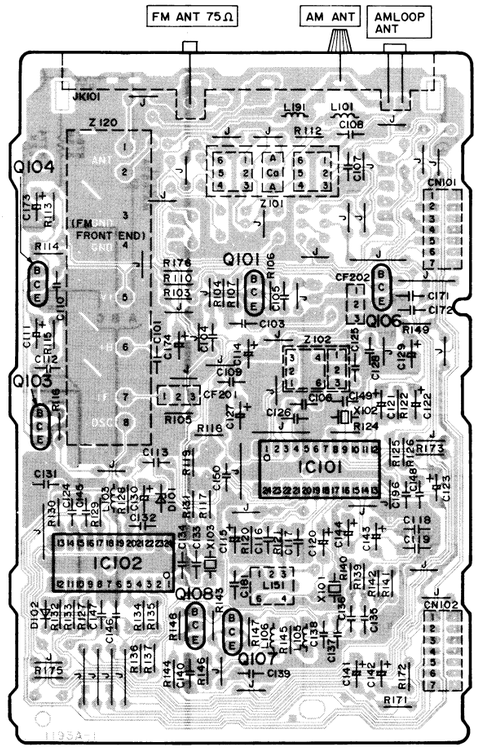
D HEADPHONES JACK P.C.B. (REP1731C-S···(E,EB,G,GN) REP1731D-S···(EG))



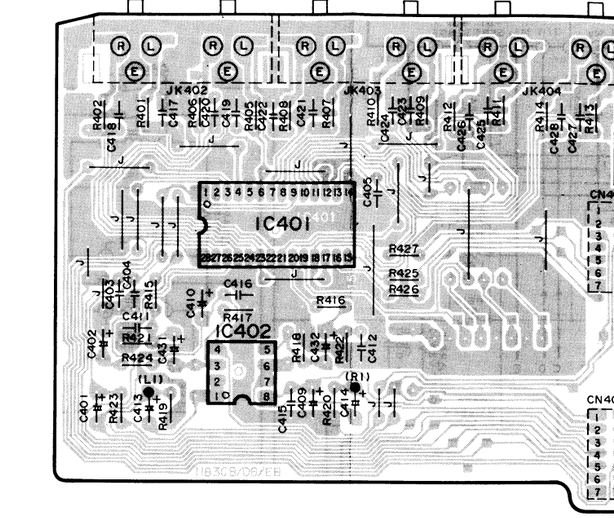
A TUNER P.C.B. For (E, EB, G, GN) areas. (REP1750B-T)



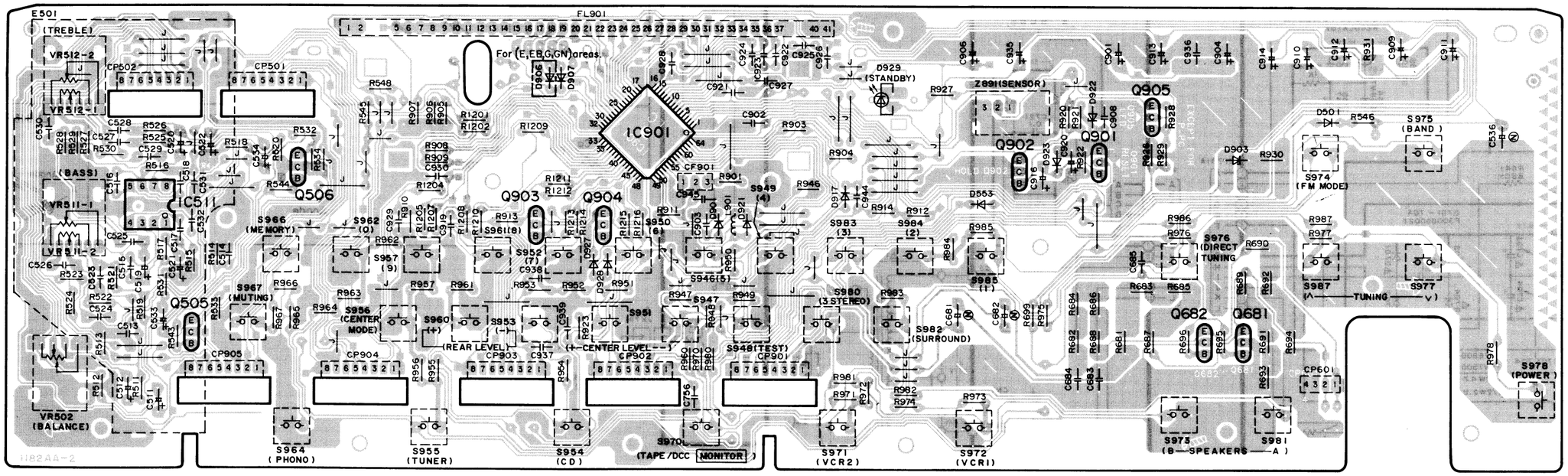
A TUNER P.C.B. For (EG) area. (REP1750C-T)



E IN/OUT TERMINAL P.C.B. (REP1732C-P···(E,EB) REP1732D-P···(EG) REP1732E-P···(G) REP1732F-P···(GN))

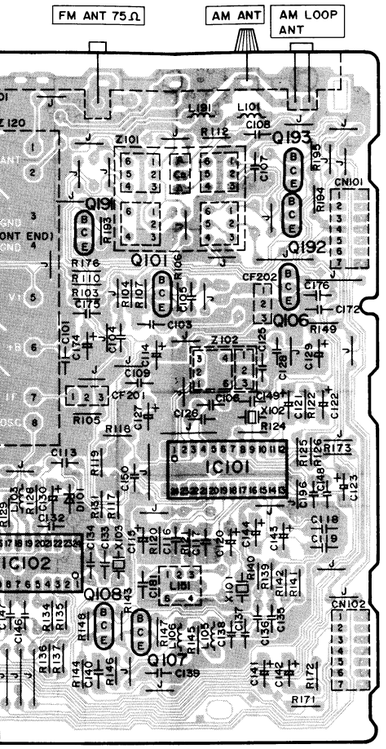


B OPERATION P.C.B. (REP1731C-S···(E,EB,G,GN) REP1731D-S···(EG))

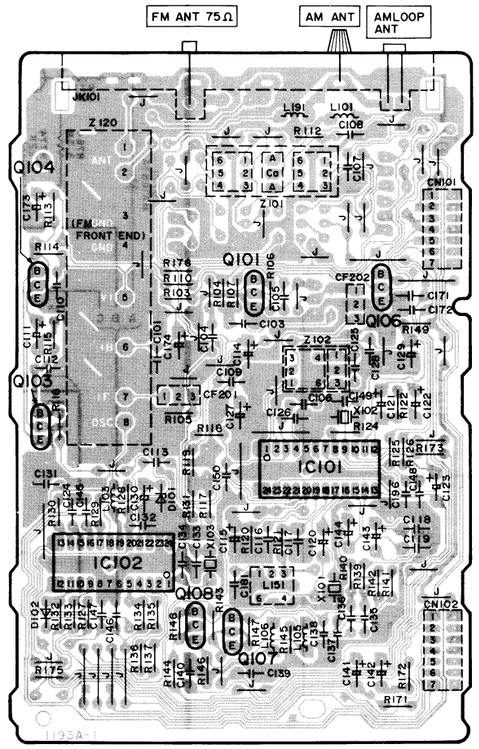


5 6 7 8 9 10 11 12 13 14

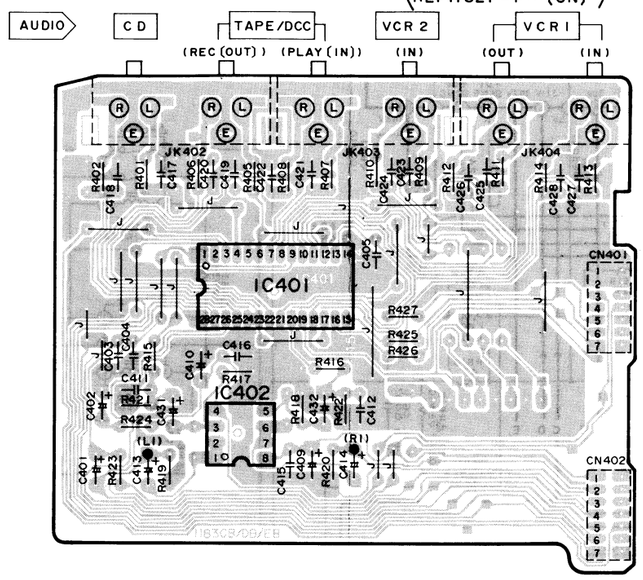
NER P.C.B. For (E, EB, G, GN) areas.
EPI750B-T)



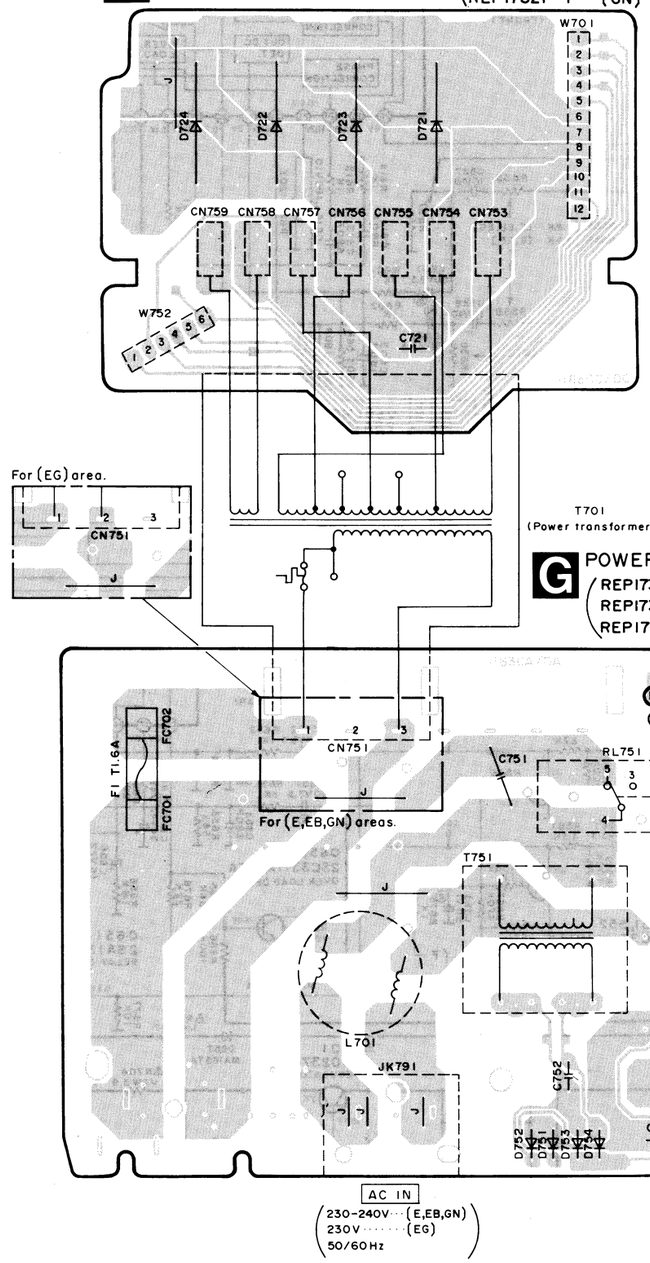
A TUNER P.C.B. For (EG) area.
(REPI750C-T)

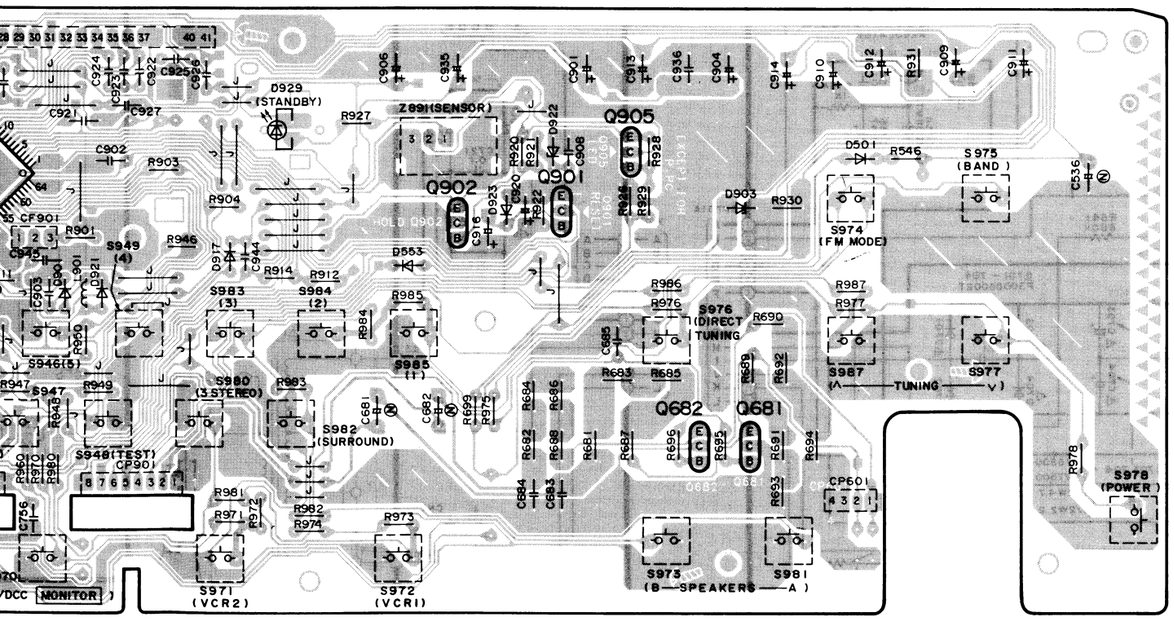


E IN/OUT TERMINAL P.C.B. (REPI732C-P···(E,EB) REPI732D-P···(EG) REPI732E-P···(G) REPI732F-P···(GN))

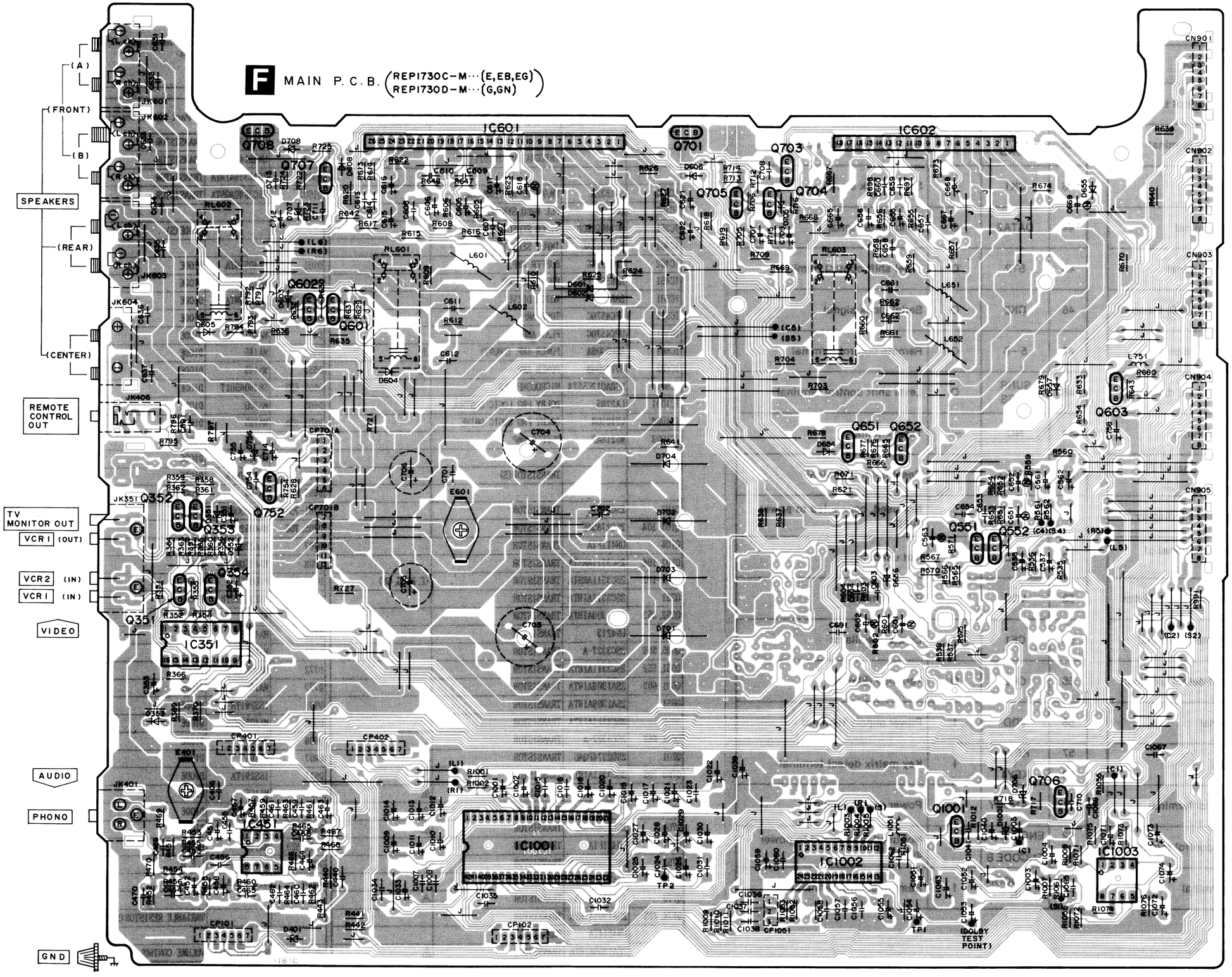


H POWER TRANSFORMER P.C.B. (REPI732C-P···(E,EB) REPI732D-P···(EG) REPI732F-P···(GN))





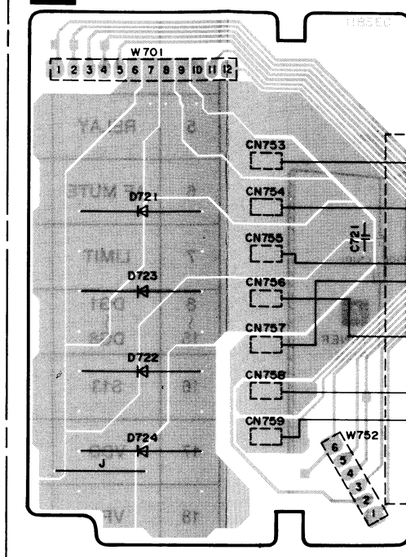
F MAIN P.C.B. (REPI730C-M···(E,EB,EG) REPI730D-M···(G,GN))



— 35 —

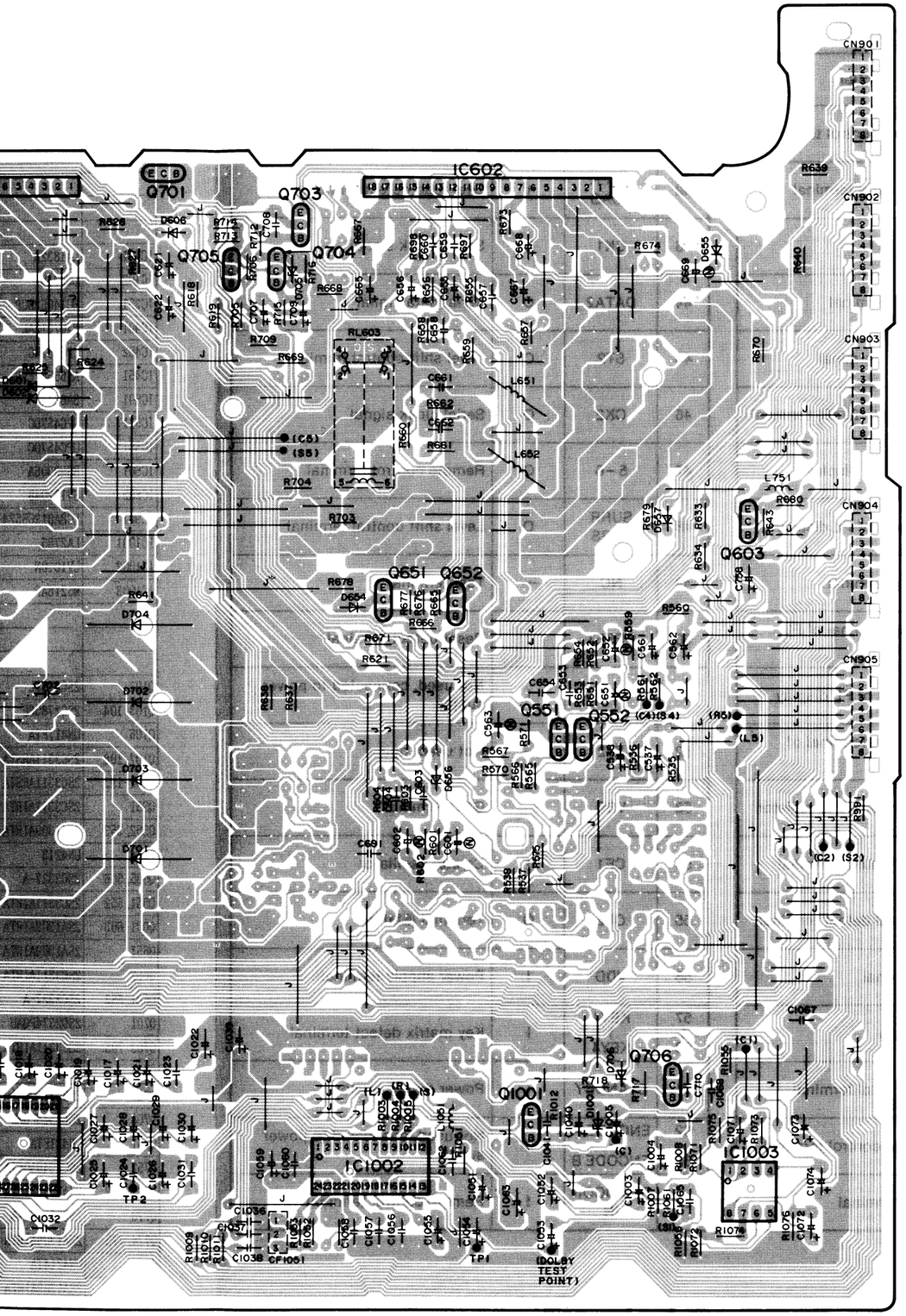
H POWER TRANSFORMER P.C.B.(R

Power Source P.C.B. For (G) area.



— 36 —

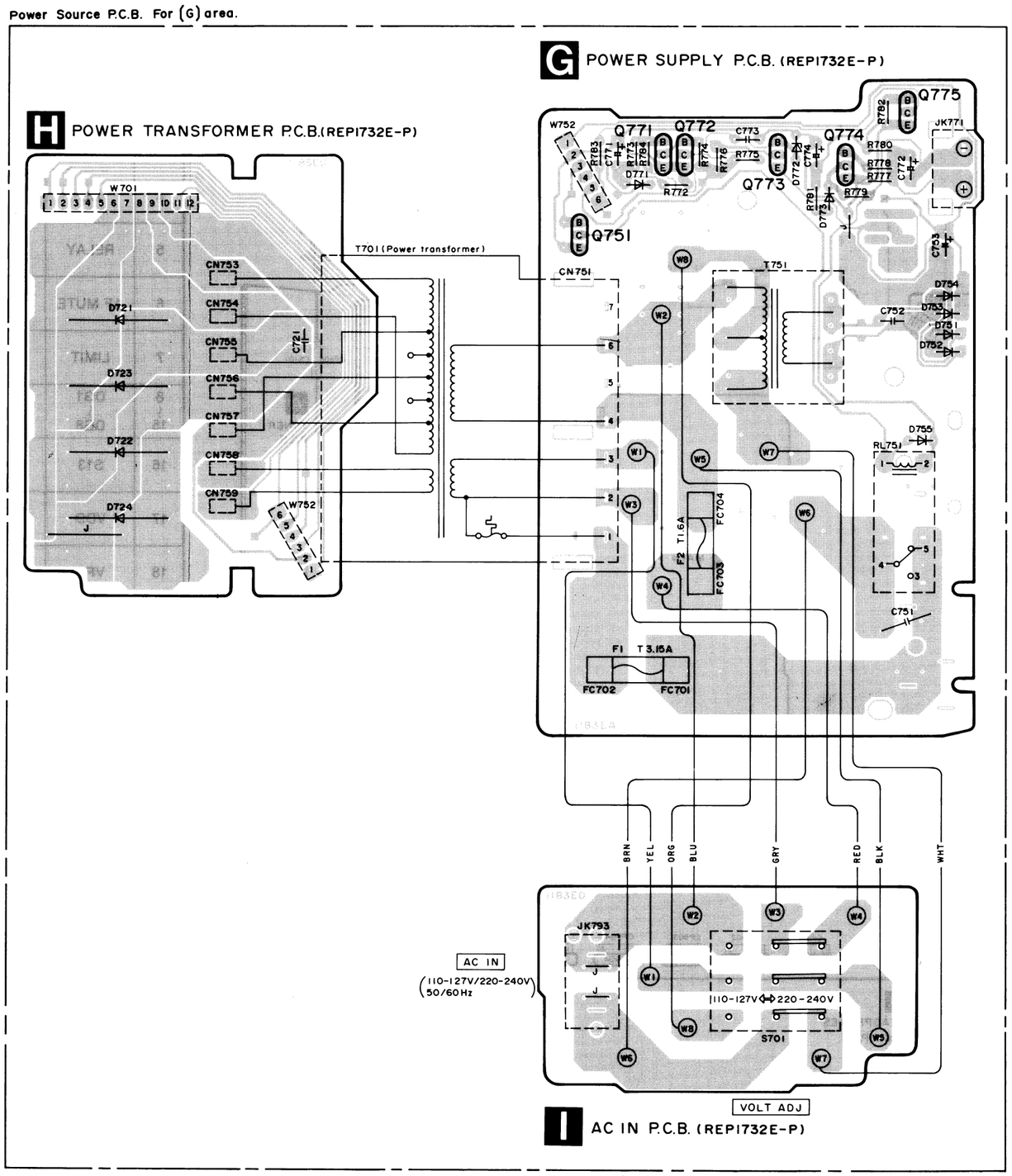
19 20 21 22 23 24 25 26 27 28 29



Power Source P.C.B. For (G) area.

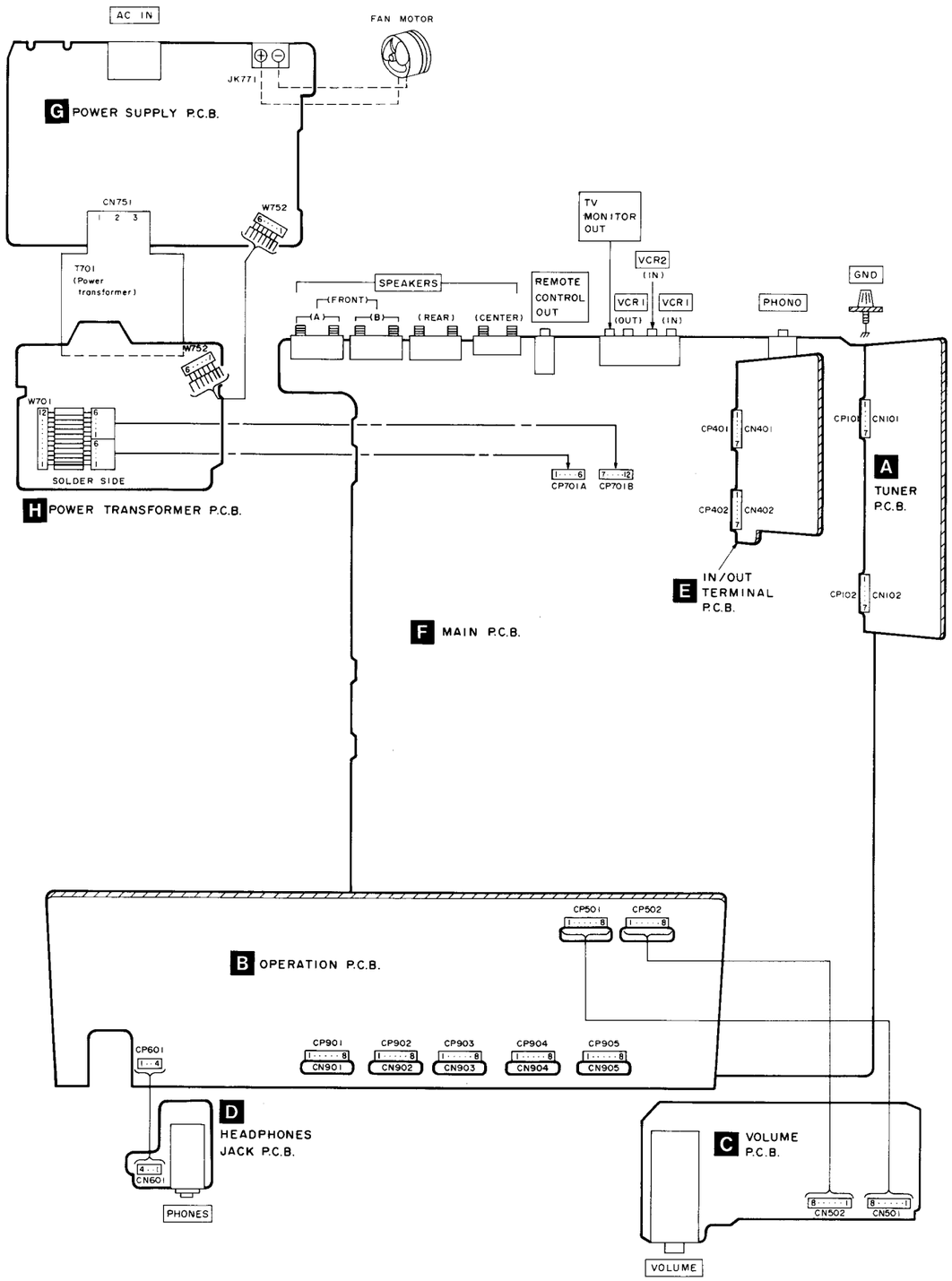
G POWER SUPPLY P.C.B. (REPI732E-P)

H POWER TRANSFORMER P.C.B.(REPI732E-P)



I AC IN P.C.B. (REPI732E-P)

■ WIRING CONNECTION DIAGRAM



■ TERMINAL FUNCTION OF IC

• IC901 (LC8A012C5524): Microcomputer

Pin No.	Mark	I/O Division	Function
1 • 2	SPA • SPB	O	Speaker select control terminal
3	ST1	O	Level shift control terminal
4	NC	—	Not used, open
5	RELAY	O	Relay control terminal
6	AF MUTE	O	Muting control terminal
7	LIMIT	O	Muting control (−20dB) terminal
8 ∫ 15	DG1 ∫ DG8	O	Digit signal of FL display
16	S13	O	Segment signal of FL display
17	VDD	I	Power supply terminal
18	VPP	I	Power supply terminal of FL display
19 ∫ 30	S12 ∫ S1	O	Segment signal of FL display
31 • 32	FWD • REV	O	Rotation control terminal of volume motor
33	IN1	—	Not used, connected to resistor
34	FMST	I	Stereo signal detect terminal
35	SD	I	Received signal detect terminal
36	IFDATAIN	I	Serial data signal
37	LOUNDNESS	—	Not used, open
38	ST3	O	Level shift control terminal
39	VIDEO	O	Video selector control terminal
40	CE	O	Chip enable terminal

Pin No.	Mark	I/O Division	Function
41	DATA1	O	Serial data signal
42	OVER LOAD	I	Over load detect terminal
43	CK1	O	Serial clock signal
44	DATA2	O	Serial data signal
45	ST2	O	Level shift control terminal
46	CK2	O	Serial clock signal
47	5−6	O	Remote control terminal
48	SURR PASS	O	Level shift control terminal
49	NC	—	Test terminal
50	RESET	I	Reset detect terminal
51	XT1	I	Not used, connected to power supply
52	XT2	—	Not used, open
53	VSS	—	GND terminal
54	CF1	I	Crystal oscillator
55	CF2	O	Terminal (6MHz)
56	VDD	I	Power supply terminal
57 ∫ 60	KEY1 ∫ KEY4	I	Key matrix detect terminal
61	STANDBY	I	Power detect terminal
62 • 63	ENCODE A • ENCODE B	I	Not used, connected to power supply
64	REMOCON IN	I	Remote control terminal

■ REPLACEMENT PARTS LIST

Notes: *Important safety notice:
Components identified by △ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC101	LA1832A	FM/AM IF AMP. /AM OSC	
IC102	LC7218	PLL FREQ. SYNTHESIZER	
IC351	MC14052BCP	VIDEO SELECTOR	
IC401	NJU7312AL	INPUT SELECTOR	
IC402	UPC4570C	BUFFER AMP.	
IC451	AN6558-FSG	PHONO EQ AMP.	
IC501	BA6218	MOTOR DRIVE	
IC511	UPC4570C	TONE AMP.	
IC551	UPC4570C	FLAT AMP.	
IC601	RSN3306A	POWER AMP. (FRONT)	△
IC602	SVI3204B	POWER AMP.	△
IC901	LC8A012C5524	MICROCOMPUTER	
IC1001	LA2785	DOLBY PRO LOGIC CONTROL	
IC1002	LV1010N	DOLBY PRO LOGIC DRIVE	
IC1003	M5218AP	BUFFER AMP	
		TRANSISTOR(S)	
Q101	2SC2787L	TRANSISTOR	
Q103, 104	2SC2785FE	TRANSISTOR	
Q106	UN411FTA	TRANSISTOR	
Q107, 108	2SC3311ARSTA	TRANSISTOR	
Q191-193	2SC3311ARSTA	TRANSISTOR	(E, EB, G, GN)
Q351	2SC3311AIRTA	TRANSISTOR	
Q352, 353	2SA1309AIRTA	TRANSISTOR	
Q354	UN4213	TRANSISTOR	
Q505, 506	2SC3327-A	TRANSISTOR	
Q551, 552	2SC3311AIRTA	TRANSISTOR	
Q601-603	2SA1309AIRTA	TRANSISTOR	
Q651	2SA1309AIRTA	TRANSISTOR	
Q652	2SC3311AIRTA	TRANSISTOR	
Q681, 682	2SC3327-A	TRANSISTOR	
Q701	2SD2374PQAU	TRANSISTOR	△
Q703-705	2SC3311AIRTA	TRANSISTOR	△
Q706	2SC3940AQSTA	TRANSISTOR	△
Q707	2SB621AQSTA	TRANSISTOR	△
Q708	2SB1548PQAU	TRANSISTOR	△
Q751	UN421FTA	TRANSISTOR	
Q752	2SC3940AQSTA	TRANSISTOR	△
Q771, 772	2SA1309AIRTA	TRANSISTOR	
Q773	2SB621AQSTA	TRANSISTOR	△
Q774, 775	2SA1309AIRTA	TRANSISTOR	
Q901	UN4214TA	TRANSISTOR	
Q902	2SA1309AIRTA	TRANSISTOR	△
Q903	UN4113TA	TRANSISTOR	
Q904	UN4214TA	TRANSISTOR	
Q905	2SA1309AIRTA	TRANSISTOR	
Q1001	2SC3940AQSTA	TRANSISTOR	△
		DIODE(S)	
D101	MA4051MTA	DIODE	△
D102	MA165	DIODE	
D351, 352	MA4056MTA	DIODE	△
D353	MA165	DIODE	
D401	MA4075MTA	DIODE	△
D501	MA165	DIODE	
D553	MA165	DIODE	
D601, 602	SB3606501T	DIODE	
D603	MA700	DIODE	
D604-606	MA165	DIODE	
D608	MA165	DIODE	
D654, 655	MA165	DIODE	
D656	MA4047MTA	DIODE	
D657	MA165	DIODE	
D701-704	P300D5002T	DIODE	△
D705, 706	MA4062MTA	DIODE	△
D707	MA4220MTA	DIODE	
D708	MA4150M	DIODE	△
D721-724	P300DLF	DIODE	△
D751-754	1SR35200TB	DIODE	△
D755	MA165	DIODE	
D756	MA4068M	DIODE	△
D771	MA165	DIODE	
D772	MA4068M	DIODE	△
D773	MA165	DIODE	
D901	1SS291TA	DIODE	
D903	MA4056MTA	DIODE	△
D906	MA165	DIODE	(E, EB, G, GN)
D907	MA165	DIODE	
D917	1SS291TA	DIODE	
D921	MA165	DIODE	
D922	MA4039MTA	DIODE	△
D923	MA165	DIODE	
D927, 928	MA165	DIODE	
D929	LN846RPH	L. E. D.	
D1001	MA4100MTA	DIODE	△
		VARIABLE RESISTOR(S)	
VR501	RRV24B01B15A	VOLUME CONTROL	

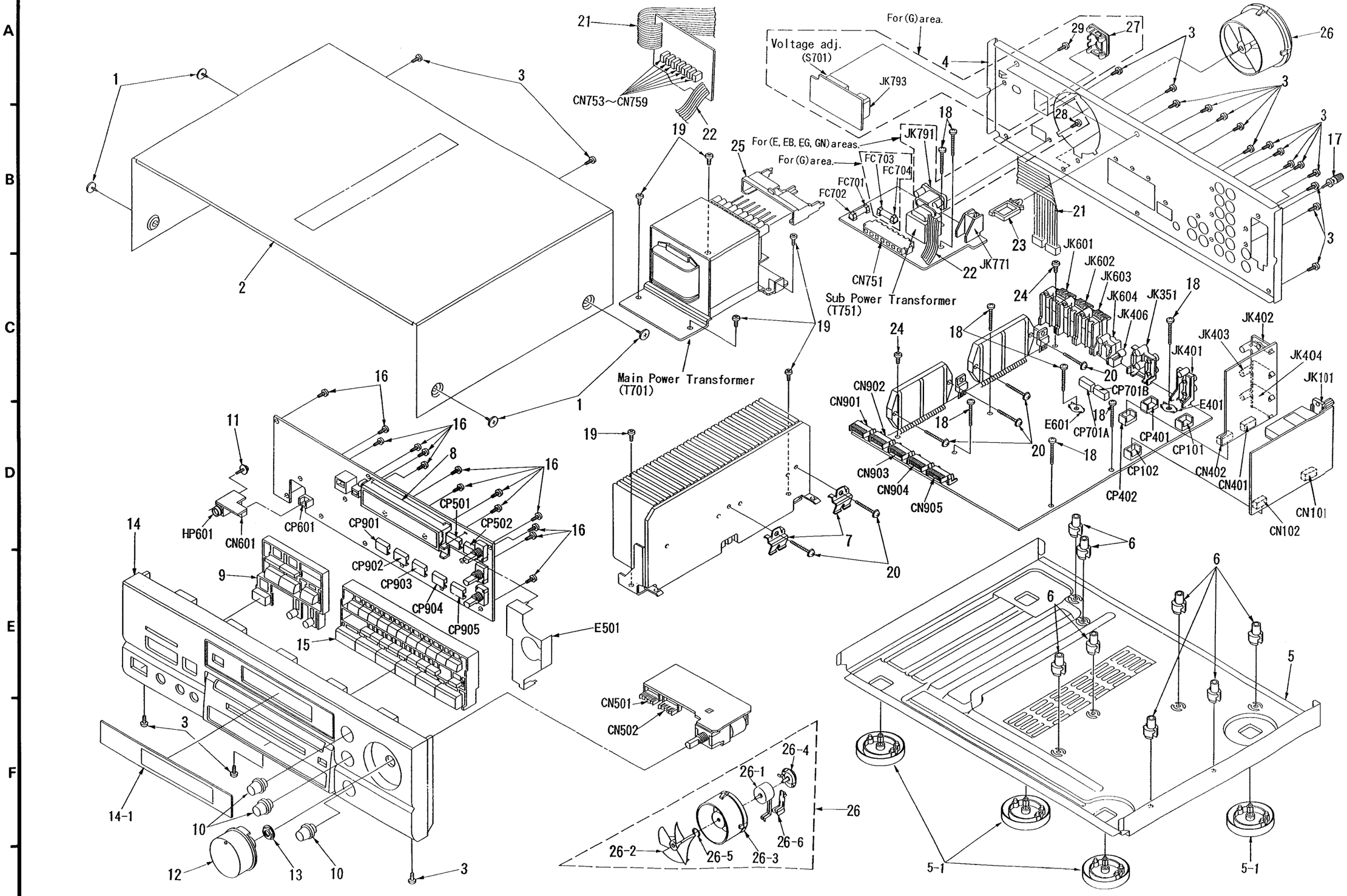
Ref. No.	Part No.	Part Name & Description	Remarks
VR502	EVJ02QF02G15	BALANCE CONTROL	
VR511, 512	EVJYA1FA5C15	TONE CONTROL	
		COIL(S)	
L101	ELESNR68MA	COIL	(E, EB, G, GN)
L101	ELESN1R0MA	COIL	(EG)
L103	ELEXTR47MA9	COIL	
L105, 106	RLQZB822KT-D	COIL	
L151	SLM1B10M-1M	COIL	
L191	ELESNR68MA	COIL	(E, EB, G, GN)
L191	ELESNR56MA	COIL	(EG)
L501, 502	RLQZP1R0KT-Y	COIL	
L601, 602	RLQYR73M	COIL	
L651, 652	RLQYR73M	COIL	
L701	SLQZ650MH49	COIL	(E, EB, EG, GN)⚠
L751	ELEPK101KA	COIL	
L901	RLQZP101KT-Y	COIL	
L1051	ELEPK101KA	COIL	
		TRANSFORMER(S)	
T701	RTP1P5E014-W	POWER TRANSFORMER(MAIN)	(E, EB, EG)⚠
T701	RTP1P5E015-W	POWER TRANSFORMER(MAIN)	(G)⚠
T701	RTP1P5E016-W	POWER TRANSFORMER(MAIN)	(GN)⚠
T751	RTP1I5E003-V	POWER TRANSFORMER(SUB)	(E, EB, EG, GN)⚠
T751	RTP1I5E005-V	POWER TRANSFORMER(SUB)	(G)⚠
		COMPONENT COMBINATION(S)	
Z101	RLA6Z005M-T	COMPONENT COMBINATION	(E, EB, G, GN)
Z101	RLA2Z002M-T	COMPONENT COMBINATION	(EG)
Z102	RLI2Z006M-T	COMPONENT COMBINATION	
Z891	RCDHC-278N	REMOTE SENSOR	
		FILTER(S) AND OSCILLATOR(S)	
CF201	RLFFETNGD01L	FILTER	
CF202	RLFFETMGD01L	FILTER	
CF901	EF0EC6004T4	FILTER	
CF1051	EF0EC8004T4	FILTER	
X101	RSX2456KM07M	OSCILLATOR(456KHz)	
X102	RLFDGTD01I	OSCILLATOR(10.65MHz)	
X103	SVQ49U722-S	OSCILLATOR(7.2MHz)	
		DISPLAY TUBE(S)	
FL901	RSL0172-F	DISPLAY TUBE	
		FM FRONT END PACK ASS'Y(S)	
Z120	ENV17290G1R	FM FRONT END	

Ref. No.	Part No.	Part Name & Description	Remarks
		FUSE(S)	
F1	XBA2C16TB0	FUSE 250V 1.6A	(E, EB, EG, GN)⚠
F1	XBA2C31TB0	FUSE 250V 3.15A	(G)⚠
F2	XBA2C16TB0	FUSE 250V 1.6A	(G)⚠
		SWITCH(ES)	
S701	ESD26840A	VOLTAGE ADJ.	(G)⚠
S946	EVQ21405R	NUMERIC 5	
S947	EVQ21405R	CENTER LEVEL(-)	
S948	EVQ21405R	TEST	
S949	EVQ21405R	NUMERIC 4	
S950	EVQ21405R	NUMERIC 6	
S951	EVQ21405R	CENTER LEVEL(+)	
S952	EVQ21405R	NUMERIC 7	
S953	EVQ21405R	REAR LEVEL(-)	
S954	EVQ21405R	CD	
S955	EVQ21405R	TUNER	
S956	EVQ21405R	CENTER MODE	
S957	EVQ21405R	NUMERIC 9	
S960	EVQ21405R	REAR LEVEL(+)	
S961	EVQ21405R	NUMERIC 8	
S962	EVQ21405R	NUMERIC 0	
S964	EVQ21405R	PHONO	
S966	EVQ21405R	MEMORY	
S967	EVQ21405R	MUTING	
S970	EVQ21405R	TAPE/DCC MONITOR	
S971	EVQ21405R	VCR2	
S972	EVQ21405R	VCR1	
S973	EVQ21405R	SP B	
S974	EVQ21405R	FM MODE	
S975	EVQ21405R	BAND	
S976	EVQ21405R	DIRECT TUNING	
S977	EVQ21405R	TUNING DOWN	
S978	EVQ21405R	POWER	
S980	EVQ21405R	3 STEREO	
S981	EVQ21405R	SP A	
S982	EVQ21405R	SURROUND	
S983	EVQ21405R	NUMERIC 3	
S984	EVQ21405R	NUMERIC 2	
S985	EVQ21405R	NUMERIC 1	
S987	EVQ21405R	TUNING UP	
		CONNECTOR(S) AND SOCKET(S)	
CN101, 102	RJU057W007	SOCKET(7P)	
CN401, 402	RJU057W007	SOCKET(7P)	
CN501, 502	RJU003K008M1	SOCKET(8P)	
CN601	RJU057W004	SOCKET(4P)	
CN751	SJS305-1	CONNECTOR(3P)	(E, EB, EG, GN)

Ref. No.	Part No.	Part Name & Description	Remarks
CN751	SJS702-1	CONNECTOR(7P)	(G)
CN753-759	RJS1A1101T1	CONNECTOR(1P)	
CN901-905	RJU003K008M1	SOCKET(8P)	
CP101, 102	RJT057W007-1	CONNECTOR(7P)	
CP401, 402	RJT057W007-1	CONNECTOR(7P)	
CP501, 502	RJT003K008-1	CONNECTOR(8P)	
CP601	RJT057W004-1	CONNECTOR(4P)	
CP701A	RJT039W06T	CONNECTOR(6P)	
CP701B	RJT039W06T	CONNECTOR(6P)	
CP901-905	RJT003K008-1	CONNECTOR(8P)	
		JACK(S)	
JK101	RJH4202M	ANT TERMINAL	
JK351	SJF3069-3N	TV MONITOR OUT/VIDEO	
JK401	SJF3068-7N	PHONO TERMINAL	
JK402	SJF3069N	CD IN/REC OUT TERMINAL	
JK403	SJF3069N	PLAY IN/VCR2 IN TERMINAL	
JK404	SJF3069N	VCR1 OUT/VCR1 IN TERMINAL	
JK406	RJJ33TR01	REMOTE CONTROL OUT TERMINAL	
JK601	RJR0054	FRONT SPEAKER(A) TERMINAL	
JK602	RJR0054	FRONT SPEAKER(B) TERMINAL	
JK603	RJR0054	REAR SPEAKER TERMINAL	
JK604	SJF5201M-1	CENTER SPEAKER TERMINAL	
JK771	RJS1A7402-1	FAN MOTOR TERMINAL	
JK791	SJS9236	AC INLET	(E, EB, EG)⚠
JK791	SJSD16	AC INLET	(GN)⚠
JK793	SJS9231-1B	AC INLET	(G)⚠
HP601	RJJ63TS01	HEADPHONES JACK	
		GND PLATE(S)	
E401	SNE1004-2	GND PLATE	
E501	RSC0350	GND PLATE	
E601	SNE1004-2	GND PLATE	
		FUSE HOLDER(S)	
FC701, 702	EYF52BC	FUSE HOLDER	
FC703, 704	EYF52BC	FUSE HOLDER	(G)
		RELAY(S)	
RL601-603	RSY0013M-0	RELAY	⚠
RL751	RSY0019-0	RELAY	⚠

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RHD30035-K1	SCREW	
2	RKM0219A-K	CABINET	
3	XTBS3+8JFZ1	SCREW	
4	RGR0161E-E1	REAR PANEL	(E)
4	RGR0161E-F1	REAR PANEL	(EB)
4	RGR0161E-D	REAR PANEL	(EG)
4	RGR0161F-A	REAR PANEL	(G)
4	RGR0161E-G1	REAR PANEL	(GN)
5	RFKJAGX470PK	BOTTOM CASSIS ASS'Y	
5-1	RKA0053-A	FOOT	
6	RKQ0089	P.C.B. SUPPORT	
7	RMC0158	TRANSISTOR HOLDER	
8	RMN0249-1	FL HOLDER	
9	RGU0990A-K	POWER BUTTON	
10	RGW0175-1K	BASS, TREBLE, BALANCE KNOB	
11	RHD26016	SCREW	
12	RGW0163A-K	VOLUME KNOB	(E, EB, EG)
12	RGW0145-1K	VOLUME KNOB	(G, GN)
13	RHN90001	NUT	
14	RFKGAGX470E	FRONT PANEL ASS'Y	(E, EB, EG)
14	RFKGAGX470G	FRONT PANEL ASS'Y	(G, GN)
14-1	RKW0318B-Q	TRANSPARENT PLATE	
15	RGU0837C-K	SELECTOR BUTTON	
16	XTBS26+8J	SCREW	
17	SNE2123	GND TERMINAL	
18	XTB3+20JFZ	SCREW	
19	XTB3+8JFZ	SCREW	
20	XTW3+15T	SCREW	
21	RFKEUG75PP-K	CONNECTOR ASS'Y(12P)	
22	RWJ1806110KK	FLAT CABLE(6P)	
23	SHR9814	CLAMPER	
24	XTWS3+8T	SCREW	
25	RMN0217	SUB2 P.C.B. HOLDER	
26	REM0020-1	FAN UNIT	
26-1	MDN-4RB4MRC	MOTOR	
26-2	SHE232-1	FAN	
26-3	RMQ0209-K	FAN CASE	
26-4	RMQ0208-K	FAN CAP	
26-5	SUS271	FAN TERMINAL	
26-6	RMQ0212-K	FAN TERMINAL CAP	
27	SJS9231A	AC INLET COVER	(G)
28	XTBS3+8JFZ1	SCREW	(E, EB, EG, GN)
29	XTBS3+8JFZ1	SCREW	(G)

■ CABINET PARTS LOCATION



■ RESISTORS AND CAPACITORS

Notes : * Capacity values are in microfarads (uF) unless specified otherwise, P = Pico-farads (pF) F = Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1 K = 1,000 (OHM), 1 M = 1,000 k (OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R103	ERDS2TJ101	1/4W 100
R104	ERDS2TJ102	1/4W 1K
R105	ERDS2TJ471	1/4W 470
R106	ERDS2TJ224T	1/4W 220K
R107	ERDS2TJ471	1/4W 470
R110	ERDS2TJ102	1/4W 1K
R112	ERDS2TJ104	1/4W 100K
R113	ERDS2TJ103	1/4W 10K
R114	ERDS2TJ562	1/4W 5.6K
R115	ERDS2TJ561	1/4W 560
R116	ERDS2TJ102	1/4W 1K
R117	ERDS2TJ473	1/4W 47K
R118	ERDS2TJ562	1/4W 5.6K
R119	ERDS2TJ183T	1/4W 18K
R120	ERDS2TJ473	1/4W 47K
R121	ERDS2TJ332	1/4W 3.3K
R122	ERDS2TJ272T	1/4W 2.7K
R124	ERDS2TJ271	1/4W 270
R125, 126	ERDS2TJ472	1/4W 4.7K
R127	ERDS2TJ103	1/4W 10K
R128	ERDS2TJ820	1/4W 82
R129	ERDS2TJ473	1/4W 47K
R130, 131	ERDS2TJ102	1/4W 1K
R132	ERDS2TJ103	1/4W 10K
R133-137	ERDS2TJ102	1/4W 1K
R139, 140	ERDS2TJ272T	1/4W 2.7K
R141, 142	ERDS2TJ102	1/4W 1K
R143, 144	ERDS2TJ222	1/4W 2.2K
R145, 146	ERDS2TJ102	1/4W 1K E, EB, G, GN
R145, 146	ERDS2TJ561	1/4W 560 EG
R147, 148	ERDS2TJ474	1/4W 470K
R149	ERDS2TJ680T	1/4W 68
R171, 172	ERDS2TJ102	1/4W 1K
R173	ERDS2TJ471	1/4W 470
R175	ERDS2TJ102	1/4W 1K
R176	ERDS2TJ391	1/4W 390
R191	ERDS2TJ103	1/4W 10K E, EB, G, GN
R192	ERDS2TJ122	1/4W 1.2K E, EB, G, GN
R193	ERDS2TJ182	1/4W 1.8K E, EB, G, GN
R194	ERDS2TJ122	1/4W 1.2K E, EB, G, GN
R195	ERDS2TJ222	1/4W 2.2K E, EB, G, GN
R351, 352	ERDS2TJ471	1/4W 470
R354	ERDS2TJ472	1/4W 4.7K
R355	ERDS2TJ470	1/4W 47
R356	ERDS2TJ152	1/4W 1.5K
R357	ERDS2TJ470	1/4W 47
R358	ERDS2TJ471	1/4W 470
R359, 360	ERDS2TJ470	1/4W 47
R361	ERDS2TJ471	1/4W 470
R362	ERDS2TJ470	1/4W 47
R363	ERDS2TJ332	1/4W 3.3K
R364	ERDS2TJ561	1/4W 560
R365	ERDS2TJ332	1/4W 3.3K
R366	ERDS2TJ104	1/4W 100K
R369, 370	ERDS1FVJ271T	1/2W 270 ⚠
R401, 402	ERDS2TJ102	1/4W 1K
R405-416	ERDS2TJ102	1/4W 1K
R417, 418	ERDS2TJ473	1/4W 47K
R419-422	ERDS2TJ104	1/4W 100K
R423, 424	ERDS2TJ102	1/4W 1K
R425-427	ERDS2TJ103	1/4W 10K
R440	ERDS1FVJ820T	1/2W 82 ⚠
R441, 442	ERDS2TJ473	1/4W 47K
R443	ERDS2TJ330	1/4W 33
R451, 452	ERDS2TJ224T	1/4W 220K
R453, 454	ERDS2TJ391	1/4W 390
R455, 456	ERDS2TJ563	1/4W 56K
R457, 458	ERDS2TJ271	1/4W 270
R459, 460	ERDS2TJ680T	1/4W 68
R461, 462	ERDS2TJ184T	1/4W 180K
R463, 464	ERDS2TJ123	1/4W 12K
R465, 466	ERDS2TJ563	1/4W 56K
R467-470	ERDS2TJ102	1/4W 1K
R501, 502	ERDS2TJ222	1/4W 2.2K
R508	ERDS1FVJ2R2T	1/2W 2.2 ⚠
R511, 512	ERDS2TJ471	1/4W 470
R513-516	ERDS2TJ474	1/4W 470K
R517, 518	ERDS2TJ332	1/4W 3.3K
R519, 520	ERDS2TJ222	1/4W 2.2K
R521, 522	ERDS2TJ223	1/4W 22K
R523, 524	ERDS2TJ392T	1/4W 3.9K
R525, 526	ERDS2TJ222	1/4W 2.2K
R527, 528	ERDS2TJ122	1/4W 1.2K
R529, 530	ERDS2TJ273	1/4W 27K
R531, 532	ERDS2TJ102	1/4W 1K
R533, 534	ERDS2TJ103	1/4W 10K
R535, 536	ERDS2TJ682T	1/4W 6.8K E, EB, EG
R535, 536	ERDS2TJ392T	1/4W 3.9K G, GN
R537, 538	ERDS2TJ392T	1/4W 3.9K E, EB, EG
R537, 538	ERDS2TJ472	1/4W 4.7K G, GN
R543, 544	ERDS2TJ102	1/4W 1K
R545	ERDS2TJ824	1/4W 820K
R546	ERDS2TJ332	1/4W 3.3K
R548	ERDS2TJ822	1/4W 8.2K
R551, 552	ERDS2TJ102	1/4W 1K
R553, 554	ERDS2TJ104	1/4W 100K
R555	ERDS2TJ123	1/4W 12K
R556	ERDS2TJ103	1/4W 10K
R557	ERDS2TJ122	1/4W 1.2K
R558	ERDS2TJ152	1/4W 1.5K
R559, 560	ERDS2TJ104	1/4W 100K
R561	ERDS2TJ332	1/4W 3.3K
R562	ERDS2TJ272T	1/4W 2.7K
R565, 566	ERDS2TJ102	1/4W 1K
R567	ERDS2TJ474	1/4W 470K
R570	ERDS2TJ103	1/4W 10K
R571	ERDS2TJ332	1/4W 3.3K
R575	ERDS2TJ102	1/4W 1K
R601, 602	ERDS2TJ102	1/4W 1K
R603, 604	ERDS2TJ563	1/4W 56K
R605, 606	ERDS2TJ182	1/4W 1.8K
R607, 608	ERDS2TJ563	1/4W 56K
R609, 610	ERDS2TJ470	1/4W 47
R611, 612	ERDS1FVJ100T	1/2W 10 ⚠
R613, 614	ERDS2TJ102	1/4W 1K
R615	ERDS2TJ184T	1/4W 180K
R616	ERDS2TJ154	1/4W 150K
R617, 618	ERDS2TJ473	1/4W 47K
R619	ERDS2TJ223	1/4W 22K
R620	ERD25FJ220	1/4W 22 ⚠
R621	ERDS2TJ183T	1/4W 18K
R622	ERDS2TJ124T	1/4W 120K
R623	ERDS2TJ684	1/4W 680K
R624, 625	ERDS2TJ154	1/4W 150K E, EB, EG
R624, 625	ERDS2TJ563	1/4W 56K G, GN
R626, 627	ERD25FVJ180T	1/4W 18 ⚠
R628-630	ERDS2TJ223	1/4W 22K
R631, 632	ERDS2TJ103	1/4W 10K
R633, 634	ERDS2TJ102	1/4W 1K
R635, 636	ERDS1FVJ561T	1/2W 560 ⚠
R637-640	ERG1SJ101E	1W 100
R641	ERDS2TJ684	1/4W 680K
R642	ERDS2TJ472	1/4W 4.7K
R643	ERDS2TJ103	1/4W 10K
R647, 648	ERDS2TJ221	1/4W 220
R651, 652	ERDS2TJ102	1/4W 1K
R653, 654	ERDS2TJ563	1/4W 56K
R655, 656	ERDS2TJ182	1/4W 1.8K
R657, 658	ERDS2TJ563	1/4W 56K
R659, 660	ERDS2TJ470	1/4W 47
R661, 662	ERDS1FVJ100T	1/2W 10 ⚠
R665	ERDS2TJ563	1/4W 56K
R666	ERDS2TJ104	1/4W 100K
R667	ERD25FJ101	1/4W 100 ⚠
R668	ERDS2TJ154	1/4W 150K
R669	ERDS2TJ223	1/4W 22K
R670	ERD25FJ470	1/4W 47 ⚠
R671	ERDS2TJ103	1/4W 10K
R673	ERDS2TJ684	1/4W 680K
R674	ERDS2TJ473	1/4W 47K
R676	ERDS2TJ223	1/4W 22K
R677	ERDS2TJ103	1/4W 10K
R678	ERDS1FVJ561T	1/2W 560 ⚠
R679	ERDS2TJ222	1/4W 2.2K
R680	ERDS2TJ333	1/4W 33K
R681-694	ERDS2TJ270T	1/4W 27
R695, 696	ERDS2TJ102	1/4W 1K
R697, 698	ERDS2TJ221	1/4W 220
R699	ERDS2TJ332	1/4W 3.3K
R703, 704	ERDS1FVJ3R9T	1/2W 3.9 ⚠
R705	ERDS2TJ472	1/4W 4.7K
R706	ERDS2TJ102	1/4W 1K
R709	ERD25FVJ221T	1/4W 220 ⚠
R712	ERDS2TJ472	1/4W 4.7K
R713, 714	ERDS2TJ1R5T	1/4W 1.5
R715	ERDS2TJ752T	1/4W 7.5K
R716	ERDS2TJ682T	1/4W 6.8K
R717	ERDS1FVJ220T	1/2W 22 ⚠
R718	ERDS2TJ182	1/4W 1.8K
R721	ERDS1FVJ4R7T	1/2W 4.7 ⚠
R722	ERD25FJ101	1/4W 100 ⚠
R723	ERDS2TJ472	1/4W 4.7K
R724	ERDS1FVJ6R8T	1/2W 6.8 ⚠
R725	ERDS2TJ152	1/4W 1.5K
R727	ERDS1FVJ4R7T	1/2W 4.7 E, EB, EG
R727	ERDS1FVJ2R2T	1/2W 2.2 G, GN
R754	ERDS2TJ102	1/4W 1K
R772	ERDS2TJ104	1/4W 100K
R773	ERDS2TJ103	1/4W 10K
R774	ERDS2TJ223	1/4W 22K
R775	ERDS2TJ332	1/4W 3.3K
R776	ERDS1FVJ220T	1/2W 22 ⚠
R777	ERDS2TJ220T	1/4W 22
R778	ERDS2TJ222	1/4W 2.2K
R779	ERDS2TJ103	1/4W 10K
R780, 781	ERDS2TJ333	1/4W 33K
R782	ERDS2TJ153	1/4W 15K
R783	ERDS2TJ103	1/4W 10K
R784	ERDS2TJ335T	1/4W 3.3M
R791-796	ERDS2TJ223	1/4W 22K
R797	ERDS2TJ682T	1/4W 6.8K
R901	ERDS2TJ102	1/4W 1K
R903-911	ERDS2TJ104	1/4W 100K
R912	ERDS2TJ102	1/4W 1K
R913, 914	ERDS2TJ104	1/4W 100K
R920	ERDS2TJ271	1/4W 270
R921	ERDS2EJ121	1/4W 120
R922	ERDS2TJ472	1/4W 4.7K
R923	ERDS2TJ102	1/4W 1K
R926	ERDS2TJ122	1/4W 1.2K
R927	ERDS2TJ181T	1/4W 180
R928	ERDS2TJ222	1/4W 2.2K
R929	ERDS2TJ562	1/4W 5.6K
R930, 931	ERDS2TJ101	1/4W 100
R946-949	ERDS2TJ103	1/4W 10K
R950	ERDS2TJ102	1/4W 1K
R951	ERDS2TJ122	1/4W 1.2K
R952	ERDS2TJ152	1/4W 1.5K
R953	ERDS2TJ182	1/4W 1.8K
R954	ERDS2TJ222	1/4W 2.2K
R955	ERDS2TJ332	1/4W 3.3K
R956	ERDS2TJ472	1/4W 4.7K
R957	ERDS2TJ682T	1/4W 6.8K
R960	ERDS2TJ102	1/4W 1K
R961	ERDS2TJ122	1/4W 1.2K
R962	ERDS2TJ152	1/4W 1.5K
R963	ERDS2TJ182	1/4W 1.8K
R964	ERDS2TJ222	1/4W 2.2K
R965	ERDS2TJ332	1/4W 3.3K
R966	ERDS2TJ472	1/4W 4.7K
R967	ERDS2TJ682T	1/4W 6.8K
R970	ERDS2TJ102	1/4W 1K
R971	ERDS2TJ122	1/4W 1.2K
R972	ERDS2TJ152	1/4W 1.5K
R973	ERDS2TJ182	1/4W 1.8K
R974	ERDS2TJ222	1/4W 2.2K
R975	ERDS2TJ332	1/4W 3.3K
R976	ERDS2TJ472	1/4W 4.7K
R977	ERDS2TJ682T	1/4W 6.8K
R978	ERDS2TJ123	1/4W 12K
R980	ERDS2TJ102	1/4W 1K
R981	ERDS2TJ122	1/4W 1.2K
R982	ERDS2TJ152	1/4W 1.5K
R983	ERDS2TJ182	1/4W 1.8K
R984	ERDS2TJ222	1/4W 2.2K
R985	ERDS2TJ332	1/4W 3.3K
R986	ERDS2TJ472	1/4W 4.7K
R987	ERDS2TJ682T	1/4W 6.8K
R991	ERDS2TJ103	1/4W 10K
R1001, 1002	ERDS2TJ223	1/4W 22K
R1003, 1004	ERDS2TJ102	1/4W 1K
R1005	ERDS2TJ203T	1/4W 20K
R1007, 1008	ERDS2TJ473	1/4W 47K
R1009-1011	ERDS2TJ332	1/4W 3.3K
R1012	ERDS2TJ102	1/4W 1K
R1051	ERDS2TJ393	1/4W 39K
R1052	ERDS2TJ105T	1/4W 1M
R1053	ERDS2TJ102	1/4W 1K
R1055, 1056	ERDS2TJ473	1/4W 47K
R1061	ERDS2TJ222	1/4W 2.2K
R1071, 1072	ERDS2TJ222	1/4W 2.2K
R1073, 1074	ERDS2TJ332	1/4W 3.3K E, EB, EG
R1073, 1074	ERDS2TJ682T	1/4W 6.8K G, GN
R1075, 1076	ERDS2TJ473	1/4W 47K
R1201, 1202	ERDS2TJ102	1/4W 1K
R1204, 1205	ERDS2TJ102	1/4W 1K
R1207-1216	ERDS2TJ102	1/4W 1K
		CAPACITORS
C101	ECBT1C103NS5	16V 0.01U
C103	ECBT1C103NS5	16V 0.01U
C104	ECBT1H102KB5	50V 1000P
C105	ECBT1H470J5	50V 47P
C106	ECBT1C103NS5	16V 0.01U
C107	ECBT1H473ZF5	50V 0.047U
C108	ECBT1H100JC5	50V 10P E, EB, G, GN
C108	ECBT1H8R2KC5	50V 8.2P EG
C109, 110	ECBT1C103NS5	16V 0.01U
C111	ECEA1EKA4R7B	25V 4.7U
C112	ECBT1C103NS5	16V 0.01U
C113	ECBT1H102KB5	50V 1000P
C114	ECEA1HKA3R3B	50V 3.3U
C115	ECEA1EKA4R7B	25V 4.7U
C116	ECBT1C822MS5	16V 8200P
C117	ECQB1H471JF3	50V 470P
C118, 119	ECQB1H103JF3	50V 0.01U
C120, 121	ECEA1HKA010B	50V 1U
C122	ECEA1HKA2R2B	50V 2.2U
C123	ECEA1HKA010B	50V 1U
C124	ECBT1H102KB5	50V 1000P
C125	ECBT1H150JC5	50V 15P
C126	ECBT1H104ZF5	50V 0.1U
C127	ECEA1CKA220B	16V 22U
C128	ECBT1C103NS5	16V 0.01U
C129, 130	ECEA0JKA101B	6.3V 100U
C131	ECBT1C103NS5	16V 0.01U
C132	ECBT1H102KB5	50V 1000P
C133	ECBT1H150JC5	50V 15P
C134	ECBT1H180JC5	50V 18P
C135, 136	ECBT1C103KS5	16V 0.01U
C137, 138	ECBT1H561KB5	50V 560P
C139, 140	ECQB1H682JF3	50V 6800P
C141-144	ECEA1HKA010B	50V 1U
C145	ECBT1H220JC5	50V 22P
C146	ECBT1H331KB5	50V 330P
C147	ECBT1H102KB5	50V 1000P
C148, 149	ECBT1C103NS5	16V 0.01U
C150	ECBT1H104ZF5	50V 0.1U
C172	ECBT1H331KB5	50V 330P

Ref. No.	Part No.	Values & Remarks
C173	ECEA1CKA220B	16V 22U
C174	ECEA1CKA101B	16V 100U
C175, 176	ECBT1C103NS5	16V 0.01U
C181	ECBT1H471KB5	50V 470P
C196	ECBT1H102KB5	50V 1000P
C351, 352	ECEA0JKA101B	6.3V 100U
C353	ECEA1CKA100B	16V 10U
C401, 402	ECEA1VKA4R7B	35V 4.7U
C403, 404	ECBT1E103ZF	25V 0.01U
C405, 406	ECBT1H101KB5	50V 100P
C409, 410	ECEA1CKA220B	16V 22U
C411, 412	ECBT1H101KB5	50V 100P
C413, 414	ECEA1CKA100B	16V 10U
C415, 416	ECBT1E103ZF	25V 0.01U
C417, 418	ECBT1H101KB5	50V 100P
C419-422	ECBT1H331KB5	50V 330P
C423-426	ECBT1H101KB5	50V 100P
C427, 428	ECBT1H221KB5	50V 220P
C431, 432	ECEA1CKA100B	16V 10U
C440	ECBT1E103ZF	25V 0.01U
C451, 452	ECEA1VKA4R7B	35V 4.7U
C453, 454	ECBT1H100JC5	50V 10P
C455, 456	ECBT1H102KB5	50V 1000P
C457, 458	ECEA1AKA330B	10V 33U
C459, 460	ECFR1E223KR	25V 0.022U
C461, 462	ECFR1E682KR	25V 6800P
C463, 464	ECEA1VKA4R7B	35V 4.7U
C465, 466	ECBT1E103ZF	25V 0.01U
C469, 470	ECBT1H181KB5	50V 180P
C503, 504	ECEA0JKA101B	6.3V 100U
C505, 506	ECFR1E104KR	25V 0.1U
C511, 512	ECEA1HKA3R3B	50V 3.3U
C513, 514	ECBT1H150J5	50V 15P
C515, 516	ECBT1H221KB5	50V 220P
C517, 518	ECBT1H330J5	50V 33P
C519, 520	ECEA1VKA4R7B	35V 4.7U
C521	ECEA1CKA220B	16V 22U
C522	ECEA1CKA100B	16V 10U
C523, 524	ECFR1E123KR	25V 0.012U
C525, 526	ECQV1H683JM3	50V 0.068U
C527, 528	ECBT1C562KR5	16V 5600P
C529, 530	ECQB1H273JF3	50V 0.027U
C531, 532	ECBT1E103ZF	25V 0.01U
C533	ECEA1CKA100B	16V 10U
C534	ECEA1VKA4R7B	35V 4.7U
C536	ECEA1HKN010B	50V 1U
C537, 538	ECEA1CKA100B	16V 10U
C551, 552	ECEA1HKA3R3B	50V 3.3U
C553, 554	ECBT1H101KB5	50V 100P
C555, 556	ECBT1H221KB5	50V 220P
C557, 558	ECBT1E103ZF	25V 0.01U
C559, 560	ECEA1CKA100B	16V 10U

Ref. No.	Part No.	Values & Remarks
C561, 562	ECEA1HKA3R3B	50V 3.3U
C563	ECEA1HKN010B	50V 1U
C601, 602	ECEA1HKN3R3B	50V 3.3U
C603, 604	ECBT1H181KB5	50V 180P
C605, 606	RCE1JU220BV	63V 22U
C607, 608	ECCR1H100K5	50V 10P
C609, 610	ECBT1H221KB5	50V 220P
C611, 612	ECQV1H473JM3	50V 0.047U
C613, 614	ECBA1H681KB5	50V 680P
C615	ECA1HM470B	50V 47U
C616	ECEA2AU100	100V 10U
C617	RCE1JU220BV	63V 22U
C618	ECEA2AN2R2SB	100V 2.2U
C621, 622	ECEA2AU100	100V 10U
C631-634	ECKT1H223ZF	50V 0.022U
C635, 636	ECKR1H103ZF5	50V 0.01U
C637	ECKT1H223ZF	50V 0.022U
C651, 652	ECEA1HKN3R3B	50V 3.3U
C653, 654	ECBA1H681KB5	50V 680P
C655, 656	ECEA1CKA220B	16V 22U
C657, 658	ECCR1H100K5	50V 10P
C659, 660	ECBT1H151KB5	50V 150P
C661, 662	ECQV1H473JM3	50V 0.047U
C665	ECA1HM470B	50V 47U
C667	RCE1JU220BV	63V 22U
C668	ECEA2AU100	100V 10U
C669	ECEA2AN2R2SB	100V 2.2U
C681, 682	ECEA1HN100SB	50V 10U
C683, 684	ECBT1C332KR5	16V 3300P
C685	ECBT1E103ZF	25V 0.01U
C691	ECKT1H101KB	50V 100P
C701	ECBT1E103ZF	25V 0.01U
C702	ECQE2104KF3	250V 0.1U
C703, 704	ECOS1JP682CZ	63V 6800U E, EB, EG ⚠
C703, 704	ECES75V752UX	75V 7500U G, GN ⚠
C705, 706	ECA1HM332B	50V 3300U ⚠
C707	RCE1VM101BV	35V 100U
C708	ECKR1H103ZF5	50V 0.01U
C709	ECEA1CKA330B	16V 33U
C710	ECBT1E103ZF	25V 0.01U
C711	ECKR1H103ZF5	50V 0.01U
C712	ECEA1HKA100B	50V 10U
C713	ECKR1H103ZF5	50V 0.01U
C714	ECEA1CKA470B	16V 47U
C721	ECQE2104KF3	250V 0.1U
C751	ECKWNS102MBM	400V 1000P ⚠
C752	ECKR1H103ZF5	50V 0.01U
C753	ECA1EM102B	25V 1000U ⚠
C754	ECBT1E103ZF	25V 0.01U
C755	ECEA1CKA470B	16V 47U
C756	ECBT1H101KB5	50V 100P
C758	ECEA1AKA101B	10V 100U

Ref. No.	Part No.	Values & Remarks
C771	ECEA1HKA2R2B	50V 2.2U
C772	ECEA1CKA100B	16V 10U
C773	ECBT1E223ZF	25V 0.022U
C774	RCE0JKA221BV	6.3V 220U
C891	ECFR1E392KR	25V 3900P
C901	ECA0JM102B	6.3V 1000U
C902, 903	ECBT1E103ZF	25V 0.01U
C904	ECA0JM471B	6.3V 470U
C906	ECEA0JKA101B	6.3V 100U
C908	ECBT1E103ZF	25V 0.01U
C909-912	RCE1JU220BV	63V 22U
C913, 914	ECEA1VKA100B	35V 10U
C916	ECEA1HKA010B	50V 1U
C919	ECBT1E103ZF	25V 0.01U
C920	ECEA1HKA010B	50V 1U
C921-928	ECBT1H331KB5	50V 330P
C929, 930	ECBT1H101KB5	50V 100P
C935	ECEA0JKA101B	6.3V 100U
C936	ECBT1E103ZF	25V 0.01U
C937-939	ECBT1H101KB5	50V 100P
C944	ECBT1H101KB5	50V 100P
C945	ECBT0J223MS5	6.3V 0.022U
C1001, 1002	ECEA1HKA010B	50V 1U
C1003, 1004	ECEA1HKA3R3B	50V 3.3U
C1005	ECEA1HKA010B	50V 1U
C1007	ECFR1E223KR	25V 0.022U
C1008	ECFR1E473KR	25V 0.047U
C1009	RCE0JKA221BV	6.3V 220U
C1010-1013	ECEA1CKA100B	16V 10U
C1014	RCE0JKA221BV	6.3V 220U
C1015, 1016	ECQV1H104JM3	50V 0.1U
C1017	ECEA1HKAR47B	50V 0.47U
C1018	ECEA1VKA4R7B	35V 4.7U
C1019	ECEA1HKAR47B	50V 0.47U
C1020	ECEA1VKA4R7B	35V 4.7U
C1021	ECEA1HKAR15B	50V 0.15U
C1022	ECEA1HKA3R3B	50V 3.3U
C1023, 1024	ECQV1H154JM3	50V 0.15U
C1025	ECEA1HKA3R3B	50V 3.3U
C1026	ECEA1HKAR15B	50V 0.15U
C1027	ECEA1VKA4R7B	35V 4.7U
C1028	ECEA1HKAR47B	50V 0.47U
C1029	ECEA1VKA4R7B	35V 4.7U
C1030	ECEA1HKAR47B	50V 0.47U
C1031, 1032	ECQV1H104JM3	50V 0.1U
C1033	ECEA1CKA470B	16V 47U
C1034	ECQV1H474JM3	50V 0.47U
C1035	ECBA1H681KB5	50V 680P
C1036-1038	ECBT1H101KB5	50V 100P
C1039	ECEA1CKA101B	16V 100U
C1040	ECEA1CKA100B	16V 10U
C1041	ECBT1E103ZF	25V 0.01U

Ref. No.	Part No.	Values & Remarks
C1051	ECEA1HKA2R2B	50V 2.2U
C1052	ECEA1HKA010B	50V 1U
C1053	ECEA1HKA3R3B	50V 3.3U
C1054	RCE0JKA221BV	6.3V 220U
C1055	ECEA1HKA010B	50V 1U
C1056	ECFR1E333KR	25V 0.033U

Ref. No.	Part No.	Values & Remarks
C1057	ECFR1E152KR	25V 1500P
C1058	ECFR1E333KR	25V 0.033U
C1059	ECEA1CKA101B	16V 100U
C1060	ECBT1E223ZF	25V 0.022U
C1062	ECBT1E223ZF	25V 0.022U
C1063	ECEA1CKA101B	16V 100U

Ref. No.	Part No.	Values & Remarks
C1065	ECBA1H681KB5	50V 680P
C1067, 1068	ECBT1C152KR5	16V 1500P
C1071, 1072	ECEA1HKA3R3B	50V 3.3U
C1073, 1074	ECEA1CKA100B	16V 10U

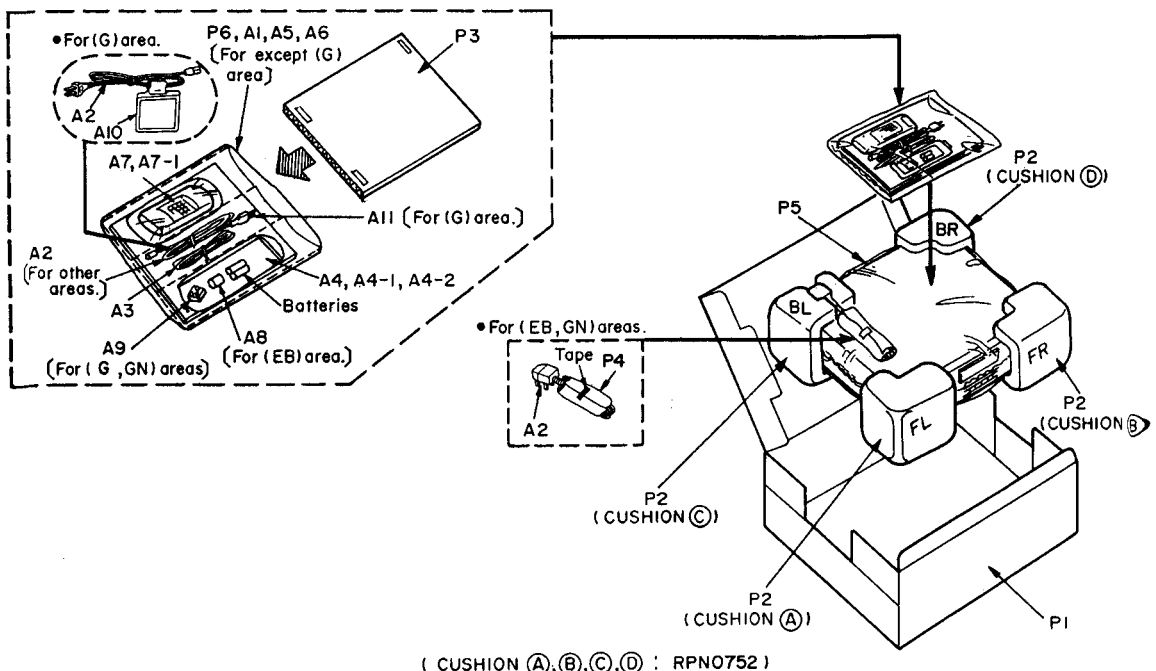
■ REPLACEMENT PARTS LIST

Notes: *Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.
*Remote Control Ass'y: Supply period for three years from termination of production.
*The "(SF)" mark denotes the standard part.

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIAL	
P1	RPG2081	PACKING CASE	(E, EG, G, GN)
P1	RPG2082	PACKING CASE	(EB)
P2	RPN0752	CUSHION	
P3	RPQ0164	PAD	
P4	RPH0032	MIRROR SHEET	(EB, GN)
P5	XZB60X65A01Z	PROTECTION BAG (UNIT)	
P6	RPF0134	PROTECTION BAG (F.B.)	
		ACCESSORIES	
A1	RFKSAGX470E	INSTRUCTION MANUAL ASS'Y	(E)
A1	RFKSAGX470EB	INSTRUCTION MANUAL ASS'Y	(EB, GN)
A1	RFKSAGX470EG	INSTRUCTION MANUAL ASS'Y	(EG)
A1	RFKSAGX470G	INSTRUCTION MANUAL ASS'Y	(G)

Ref. No.	Part No.	Part Name & Description	Remarks
A2	RJA0019-2K	AC POWER SUPPLY CORD	(E, EG, G) ⚠ (SF)
A2	VJA0733	AC POWER SUPPLY CORD	(EB) ⚠ (SF)
A2	RJA0036-K	AC POWER SUPPLY CORD	(GN) ⚠ (SF)
A3	RSA0007	FM INDOOR ANTENNA	
A4	RSA0010	AM LOOP ANTENNA SET	
A4-1	RMN0244	AM ANTENNA HOLDER	
A4-2	XTN3+10AFZ	SCREW	
A5	RQCB0169	SERVICENTER LIST	
A6	RQA0013	WARRANTY CARD	(E, EB, EG)
A6	RQX7433ZA	WARRANTY CARD	(GN)
A7	RAK-SA114XH	REMOTE CONTROL TRANSMITTER	
A7-1	RKK0057-K	BATTERY COVER	FOR R/C TRANSMITTER
A8	SJP9009	ATTACHMENT PLUG	(EB) ⚠
A9	RFE0014	ANTENNA PLUG	(G, GN)
A10	RQLA0134	VOLTAGE CAUTION LABEL	(G)
A11	SJP5213-1	POWER PLUG ADAPTOR	(G) ⚠

■ PACKAGING



(CUSHION Ⓐ, Ⓑ, Ⓒ, Ⓓ : RPN0752)

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